The RHODE ISLAND MEDICAL JOURNAL

VOL. XLIII JULY, 1960 NO. 7

The Ninth Annual Arthur Hiler Ruggles Oration . . .

RECENT DEVELOPMENTS IN MENTAL HEALTH RESEARCH*

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I AM MOST APPRECIATIVE of the honor of being selected to give the Arthur H. Ruggles Oration. This occasion is doubly a privilege for me because of my warm personal affection and respect for Doctor Ruggles. Through his distinguished career in the field of psychiatry, his achievements as superintendent of the Butler Hospital, his long service as secretary and then as president of the American Psychiatric Association, Arthur Ruggles has exercised great leadership in the field of mental health. He is the model on whom I have tried to construct my own professional life. He was my mentor and he helped me immeasurably in my development as a psychiatrist during the period I was here in Providence working at the Bradley Home. Those were busy, productive and very pleasant days for me, and I have retained since then a keen interest in the affairs of your city and of the state of Rhode Island. My pleasure in returning to Providence and in delivering the Ruggles Oration make this opportunity to talk to you an extremely happy occasion for me.

In my address tonight I would like to consider with you some of the important developments in mental health research during the past few years, and the implications of these developments. The National Institute of Mental Health, as the focal point for the Federal mental health program, is an excellent listening post for what is going on in psychiatric research all over the world.

I was recently called upon to present an overview of the state of the field of mental health to my employers—the people of the United States as represented in the Congress—in connection with appropriation hearings covering the NIMH budget for next fiscal year. I was extremely gratified to be able to report that some radically important developments in basic research have been made during the past few years. Much of the credit for these advances must go to Congress itself, and in particular to one man, a Rhode Islander, who with great wisdom and foresight has consistently supported mental health activities. The whole field of mental health research owes a tremendous debt to Congressman John Fogarty. We would not have been able to accomplish all that we have, had it not been for his zeal in expanding the horizons and the scope of mental health research.

The last few years have witnessed a rebirth of interest in the study of the many complex relationships between mind and body. There have been fundamental changes in approach and some extremely important break-throughs at the basic level. Significant correlations between neuron and thought, between physiological and behavioral change are being discovered. The ultimate general answers to the perplexing problems of these relationships may not be found for many years. Meanwhile, however, a multitude of specific questions are being answered almost daily by psychologists, physiologists, psychiatrists, biochemists, neurologists, pharmacologists, and workers in many other fields of scientific investigation. It is well understood, for instance, that psychological stress can be partly or wholly responsible for a number of physical ailments, among them hypertension, ulcerative colitis, certain types of asthma, and many others. Conversely, certain forms of mental illness and retardation have been shown to be rooted in physical disease of dysfunction.

Variety of Approaches to Study Being Made

In view of the rich possibilities and exciting leads in this field of investigation, scientists all over the country are now undertaking a variety of approaches to the study of the many subtle and complicated metabolic processes of the body. A prime example of this trend has been the attempt, using new methodologies developed during the past ten to fifteen years, to find a biochemical basis for schiozophrenia. Recent research has suggested that some forms of mental illness may be related to altered biochemical processes. To establish that changes in body and brain chemistry and the occurrence of mental illnesses do have a definite

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*Presented at the Annual Meeting of the Rhode Island Association for Mental Health, at Butler Health Center, Providence, Rhode Island, April 28 ,1960.

causal relationship is, however, a complicated and expensive task. The brain is a highly complex system made up of a great many separate subsystems, each with its own neurophysiological and biochemical characteristics. The intricate and delicate processes constantly going on in each of these subsystems, not only in the brain, but throughout the whole central and autonomic nervous system, are gradually being discerned. But the vast unanswered question still remains: What are the ties between all these complex chemical processes and the equally complex congeries of the mental illnesses?

One method of attacking this problem lies in the search for possible psychotoxic substances that may occur in the blood or urine of patients suffering from mental illness. If there is some biochemical derangement in these patients, a careful analysis of their bodily fluids and a comparison of these fluids with those of normal people may reveal the source of the mental illness. It is extremely difficult, however, to determine whether a certain chemical substance is related to the cause or is a by-product of a mental disease. Also, many extraneous factors, such as diet and incidence of infectious diseases, may account for observed differences in biochemical substances and reactions between normal persons and mental patients.

The past few years have seen the discovery of a number of promising leads linking schizophrenia to faulty metabolism and to one or another chemical substance. In the case of some of these substances, scientists elsewhere have been unable to replicate the findings. In the case of other substances, it has been found that the biochemical differences resulted from factors other than the presence of mental illness. Some leads need more study and are still "open."

A few years ago there was a report that faulty ceruloplasmin metabolism was involved in schizophrenia. Investigators reported that fresh serum of schizophrenic patients oxidized a certain dye more rapidly than the fresh serum of healthy, normal subjects. This more rapid oxidation was interpreted to mean that schizophrenic patients had higher than normal blood levels of ceruloplasmin and that this might be related to the schizophrenic process. Further study of the phenomenon revealed that the observed difference between schizophrenic patients and normal subjects was more closely related to serum levels of ascorbic acid (Vitamin C) than of ceruloplasmin. The difference between the two groups reflected a dietary rather than a pathological phenomenon. Schizophrenic patients under study at the Clinical Center in Bethesda, who were on a carefully balanced and supervised diet, had serum levels of ascorbic acid which were about the same as normal subjects. Fresh blood serum from these patients consequently failed to oxidize the dye more rapidly than serum from normal control patients.

Another theory relates psychosis to a deficiency of serotonin in the central nervous system; serotonin is a naturally occurring substance in the body which is involved in smooth muscle control. Doctor Harris Isbell of the National Institute of Mental Health has carried on a series of studies which question the validity of this theory. The fact that his experiments do not support the theory does not mean, however, that the theory has been disproved, since any one of a number of yet unknown factors may be responsible for the negative results. It does mean that the theory needs further careful and cautious study and testing.

Other investigators have reported the isolation of a protein from the blood of schizophrenics which they named taraxein and which, in their experiments, produced catatonia in normal monkeys and humans. Investigators working elsewhere have attempted to replicate the experiments but they have reported that they have been unable to confirm that taraxein produces symptoms of schizophrenia in normal monkeys and humans. They suggest that possibly the findings of the original group may have been due to some factor or subtle technique of which the experimenters themselves were unaware.

In another case, researchers had reported abnormalities in urinary excretion of phenolic acid by male schizophrenic patients. Other investigators found these differences between patients and normal subjects were due to different coffee drinking habits. The investigators were "tipped off" by the fact that the phenolic acids being excreted in greater quantities by schizophrenic patients are also metabolic products of substances present in coffee. When they investigated, they discovered that the schizophrenics drank significantly larger amounts of coffee than did the normal subjects. This finding emphasizes the importance of a careful search for uncontrolled variables in the presence of metabolic differences.

In another investigation, evidence was produced that blood plasma fractions from psychotic patients markedly affect behavior in rats. Blood fractions obtained from normals and from actively hallucinating psychiatric patients were injected into rats. Both fractions caused an increase in the time it took the rats to perform a previously learned rope-climbing test. However, the fractions from the psychotic patients caused approximately twice as much delay as the normal fractions. After the two types of blood plasma were placed on opposite sides of a cellophane membrane to allow the selective dialysis of small molecular materials, the dialized normal blood fraction produced a climbing delay at least equal to that previously produced by the un-

dialized psychotic fraction. This dialyzability of the "active" portion indicates that it probably is not a protein but a small molecule capable of being attached to a protein. Further work is needed to develop and verify this evidence of the existence of an abnormal factor in the blood of psychotics.

Basic biochemical research in the field of mental illness is a complex, rapidly developing and rapidly shifting area of investigation. New bits and pieces are constantly being added to the picture. The new psychoactive drugs and psychotomimetic substances have given us powerful additional tools for this type of research. If chemical agents can initiate or alleviate psychoses, it is possible that chemical faults or imbalances in the body may be implicated in producing them. Perhaps the greatest value of drug research in the field of the emotions will ultimately lie in its ability to reveal more about the basic causes and mechanisms of mental illness.

Interesting leads have come from research in reserpine and iproniazid, to cite just two examples. Serotonin and norepinephrine occur naturally in the brain. Reserpine flushes both serotonin and norepinephrine out of the brain, at the same time making a person tranquil and quiet. Iproniazid, on the other hand, causes serotonin and norepinephrine to accumulate in the brain; behaviorally, sometimes it relieves depression and sometimes it produces psychotic excitements. But it is still unclear whether or not the effect of these two drugs on the amount of serotonin and norepinephrine in the brain is directly and unequivocally related to the changes in behavior produced by the drugs. When we find out what these and other psychoactive drugs really do to the chemistry of the body, we will also have learned much more about the biochemistry of mental illness.

Psychotomimetic substances—chemicals that can produce transient psychotic-like states in normal people—are also being used as tools to uncover biochemical factors affecting behavior. These substances, which include such diverse chemical compounds as lysergic acid diethylamide, mescaline, sernyl, and benactyzine, cause nonpsychotic people to develop psychotic symptoms such as hallucinations, delusions, and feelings of unreality and dissociation which last for a few hours and then disappear. If we can discover why certain chemical compounds cause these changes in behavior, we will have some significant clues which may lead us to the discovery, if they exist, of substances in the body that, under certain circumstances, may play a role in mental illness.

The whole new field of psychopharmacology has advanced remarkably in a very short period of time. The vitality of research in this field is reflected in the wide variety of studies resulting in new drugs and new techniques for testing them. In addition to a large number of tranquilizing agents, a whole series of potent new drugs are now available for the treatment of depressive states. Studies conducted during the past year have produced definitive findings regarding the effectiveness of drugs in treating relatively chronic schizophrenic patients in the community. Investigators working in the aftercare clinic of one State Hospital found that drugs play a very important part in preventing relapse in schizophrenics released to the community after two or more years of hospitalization.

Brain and Central Nervous System Better Understood

During the past few years, we have also made great progress in our understanding of the structure and function of the brain and central nervous system. Until a few years ago, it had been supposed that nerve cells transmitted impulses on an "all or none" basis. It was believed that a stimulus either yielded a standard nerve response or no response at all. About four or five years ago, several neurophysiologists, working independently of one another, determined that "graded responses" occur at each end of a nerve cell—that is, at both the receiving and the transmitting ends. These responses are local and cumulative, accurately "grading" incoming stimuli into "all or none" impulses for long distance transmission. The importance of this discovery lies in the fact that it is the neural endings containing the graded response mechanisms which are likely the seat of our most complex mental activity and which are definitely areas most importantly affected by drugs. A great deal of cerebral and neural activity, too complicated to be explained by the "all or none" theory of transmittal, can be much more clearly understood in the light of this new insight into a basic neurophysiological mechanism.

One problem which has plagued investigators recording electrical activities from within the cell body is that they can never be sure that electrical potential is produced across the part of the cell membrane the microelectrode happens to enter. In addition, it has not generally been possible to place these electrodes within dendrites (the receiving part of nerve cells) to record the electrical activity occurring there. A new technique now permits investigators to measure membrane current by means of electrodes placed just outside the membrane of the nerve cell body and dendrites. This technique avoids some of the unsureness of older techniques of recording, and gives promise of permitting physiologists to understand and assess more fully the fundamental changes in nerve-cell membrane permeability which occur during synaptic activity, and which explain more adequately the mechanism of action of the graded response.

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A number of highly significant studies have given us increasing knowledge about the way in which the brain works. One investigator has demonstrated that electrical stimulation of a certain part of the brain appears to produce true emotional states of fear and terror in unanesthetized monkeys. When this particular locus is stimulated, the monkey will bite fiercely and repeatedly, even to the point of damaging its teeth if harmful objects are not removed from its reach. The obvious pain of biting is apparently less unpleasant to the monkey than the emotions of fear and panic induced by the stimulation.

In other studies, neurophysiologists investigating brain structure have isolated those parts of the brain which are related to preservation of the species, as well as the region associated with self-preservation. The close proximity of these regions to each other and to the part of the brain controlling the olfactory sense, invites further speculation about the relationship of these neurophysiological structures to forms of behavior that are in the province of the social and psychological sciences. Studies of the effects of brain damage have also added much to our understanding of the physiology of the central nervous system.

A whole new area of investigation and an extremely fascinating one deals with the necessity for a continuous flow of information from the outside world in order to maintain normal mental processes. One study has gathered evidence indicating that the visual centers of the brain show more electrical activity during sleep than during waking states. When investigators measured the electrical impulses emitted by the brain cells involved in visual perception, they found that these cells continue firing in random fashion during sleep. Neurophysiologists call this random activity "background noise." When the animals tested awoke, a good deal of this spontaneous activity disappeared. The controlling or inhibitory forces which are essential for organized perception thus appear to be more evident during waking than during sleep. The investigators then applied visual stimuli to the experimental animals both during sleep and during the waking state. In both cases, the visual stimulus caused an increase in neuron activity, indicating an evoked response to the stimulus. However, there was still considerable "background noise," or random neuronal discharge, behind the evoked response while the animal was asleep, whereas practically all of the "background noise" disappeared during the evoked response when the animal was awake. The controlling or inhibitory forces during wakefulness thus permit greater concentration on and response to the visual stimulus. Following the evoked response there was an inhibitory period, both in sleep and in wakefulness, during which the random firing of the nerve cells was inhibited. This period, though, was more marked and more prolonged during the waking state. These data suggest that sleep is associated with an alteration of the pattern of cerebral activity, rather than with the absence of activity in the brain. The findings of this study are in agreement with previous theories that the coordinated brain activity required for normal waking behavior is partially dependent upon continuous inflow of controlling (or inhibitory) nerve impulses to the sensory mechanisms of the brain.

Basic metabolic studies have brought new understanding of conditions leading to different forms of mental retardation. Scientists have been able to identify the processes by which the body enzymatically converts phenylalanine to tyrosine. This is important because faulty metabolism of phenylalanine results in phenylketonuria, a condition that can lead to phenylpyruvic oligophrenia—a severe form of mental retardation. A certain number of children are born each year with this inherited metabolic fault, but now that we understand the condition, it is possible to prevent retardation by feeding them a special diet during the first few years of their life. Researchers have even developed a simple urine test which makes it comparatively easy to identify infants whose bodies are unable to metabolize phenylalanine.

Other investigators have identified another metabolic disturbance in which a deficit of amino acids in the body produces what has been called "maple sugar urine disease," a condition that results in early mental deterioration. The urine of victims of this disease has a strong maple sugar odor. Work is now in progress to develop a special diet to combat this disease.

Trends in Psychological and Sociological Approaches

While there are many other extremely important and fundamental advances in basic research, I would like to turn now from a discussion of these physiological studies to consider some of the trends and recent advances in the psychological and sociological approaches to mental illness, mental health, and personality development.

One of the particularly rich areas of investigation during the past two or three years has been the effect of family relationships on the production and the course of mental illness. While it has long been recognized that the family must play some role in the production of abnormal behavior, it is only recently that intensive studies of families of schizophrenics have been undertaken. In one study at Yale University, it was found that in their series of cases not one of the patients' families was reasonably well integrated. The mother's attitude

toward the child generally reflected her attitude toward the marriage, and all of the marriages were gravely disturbed. They were either torn by conflict or distorted by the necessity of one spouse passively to accept the pathological behavior of the other. Sixty per cent of the patients had at least one parent who was a schizophrenic, a borderline schizophrenic, or paranoid. These parents surrounded the growing children with unreal concepts of life, and thus, when faced with conflict themselves, the children came to terms with life by misperceiving and distorting it.

In another study of the families of schizophrenics at Palo Alto, California, the investigator has reported that the parents tend to make their children extremely dependent upon them and at the same time deny that the dependent responses are appropriate. Indeed, these parents threaten withdrawal of support if the child even tries to point out that the dependency exists.

Clinical investigations at the National Institute of Mental Health suggest that family structures which assign rigidly defined patterns of behavior (or social roles) to their members may precipitate psychotic behavior. This can occur when the family imposes upon the individual a role which he cannot maintain, and which denies him opportunities to experiment with other roles as a way of developing individuality within the family unit. This denial of freedom to experiment with other roles may reflect severe anxiety within the family, and any deviation from the expected role may be resisted because of the anxiety-producing effects of such deviation.

In another study, significant patterns in disturbed familial relationships emerged from intensive research on a group of fathers, mothers, and schizophrenic patients who were treated in family psychotherapy. Four families (consisting of father, mother, and severly impaired schizophrenic patient) lived together in a psychiatric ward and participated in family psychotherapy for a period up to two and one-half years. An additional six families (consisting of father, mother, and overtly psychotic schizophrenic patient) were treated in outpatient family therapy for a period of up to two years. The function of the father, as he participated in the day-to-day life of the family, was studied intensively. In all ten families there was a striking emotional distance between the parents. The fathers and mothers appeared equally immature and the families were incapable of many decisions that are routine for other families. The greatest conflicts between parents were in their convictions about proper treatment of the patient.

Research in family-child relationships among normal children is important for an understanding of what happens in illness as well as for understanding normal behavior. Among the advances in this field has been the development of a technique for objectively measuring parental attitudes toward child-rearing and family life. This device, developed by investigators at the National Institute of Mental Health, has already proved useful to researchers both in this country and abroad, and makes it possible to correlate findings from many widely separated laboratories dealing with problems of parental attitudes. Investigators in the Institute's Section on Child Development have devised a research procedure for measuring maternal behavior. Work already completed indicates that much maternal behavior can be understood in terms of control versus permissiveness, and hostility versus love.

Studies carried out by our Laboratory of Socio-environmental Studies and elsewhere have shown significant differences between the ways in which parents in different social classes exercise their parental authority. These differences are related to underlying differences in parental values. Working-class parents emphasize obedience and conformity, while middle-class parents tend to stress responsibility, happiness, and creativity. When working-class parents punish their pre-adolescent children physically, they tend to do so in terms of the immediate consequences of the child's action. Middle-class parents tend to punish their pre-adolescent children in terms of their interpretation of the child's intent in acting as he does. These investigations of intra-family relationships are an important beginning in the acquisition of basic information helpful in understanding the factors that make for mental good health or mental ill health.

Modern recording techniques and careful statistical and psychometric methods are being used to study congenital personality traits—traits that appear in human infants immediately after birth and before exposure to maternal care. This kind of study is a significant attempt to understand the behavioral propensities with which children are born, and may provide a method of identifying the constitutional prerequisites of both disturbed and normal behavior.

The Institute's Section on Child Development is studying the interactions between genetic and environmental factors in early behavior development, as well as the nature of learning in the early stages of human development. One aspect of this program is to revise and standardize an improved scale for measuring and scoring mental, motor, and personality development in infants. Another focus is on the drives and reaction tendencies of normal infants (such as curiosity and the need for visual and other stimulation), and the relation of these drives to learning and personality formation. Observations are also being made of the behavior of

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infants reared in such different environments as an institution and a middle-class American home. These observations are being made in the actual environment.

The child's propensity for change is the focus of still other studies in this area. Scientists at the Fels Research Institute have studied IQ changes in 140 children who were tested regularly from infancy to age 10. They found that IQ's do change, that these changes are related to certain personality variables, and that the direction of change can be predicted from observation of particular personality characteristics. By and large, children who are concerned with achievement, who are aggressive and competitive, and who are curious about the world around them, tend also to show increases in IQ. Children who are passive and unusually conforming tend to show decreases in IQ. The closer the genetic relationship of the children, the more similar the pattern of IQ changes will be, so that these personality differences may be nonverbal ways in which intelligence manifests itself. The authors could find no relationship between rates of physical growth and mental growth during the first ten years of life. The indication that personality characteristics may affect intellectual development has significance for our understanding of child-rearing techniques, school programs, and the prediction of adult intelligence.

Process of Aging Subject to Important Research

There is also a great deal of important research now going on that is concerned with the other end of the life span. We are constantly learning more about the process of aging as a part of human development, and about the characteristics which are attributable to normal and abnormal aspects of this process. Several years ago, the Institute conducted an interdisciplinary research program on aging in healthy elderly men and the results of this study are soon to be published. It was found that healthy older men (the average age of the group was 72) are not very different from healthy younger men, and that illness rather than age often accounts for the typical picture one has of a group of older individuals. When the group was subdivided into 27 who were healthy and 20 with subclinical conditions like mild hypertension, certain psychological differences were noted that could be related to the level of physiological function. However, both groups differed significantly from younger men on certain psychological measurements. It appears that although health alone seems to be a factor in the physiological differences between young and old, normal aging as well as health is important in psychological differences between the two age groups. Psychological factors, however, also have an effect on physiological functions. For example, those older men who were functioning less well in their social environment, and who found leisure time and retirement oppressive, had lower than normal cerebral blood flow and cerebral oxygen consumption.

Many other studies on aging have been initiated during the past two or three years. Among these are larger interdisciplinary programs of research at Duke University and at the Albert Einstein College of Medicine, where co-ordinated work is being done on all aspects of aging—psychological, physiological, and sociological. The interdisciplinary approach, to be sure, has been adopted in many areas of mental health research. We have come to this approach because, as our knowledge increases, so does our awareness of the extreme complexity and interrelatedness of factors involved in what we consider to be normal and abnormal functioning. Though the greater part of our task still lies ahead, our accomplishments to date in basic research have indeed been impressive.

These developments have been paralleled during the past few years by equally rapid and far-reaching developments in care, treatment, and rehabilitation of the mentally ill. One of the most striking evidences of this change is the fact that this year, for the fourth consecutive year, the population in our public mental hospitals has declined. This fact is especially heartening. It represents a reversal of a long trend toward ever-increasing numbers of patients in mental hospitals, a trend which we had been combatting for over a century without being able to reverse it. The drop in hospital population means that more patients are being treated successfully. Although admission rates have been going up, the rate of discharge has increased even more rapidly, so that there has been a net over-all drop. More people are receiving treatment and more are getting better. We are beginning to see concrete results from some of our research activities and experiments in new methods of therapy and resident patient care.

Although they are by no means the only factors involved, the increased discharge rates from mental hospitals have become associated in the public mind with the use of the various tranquilizing and energizing drugs. The advent of the new psychoactive drugs *has* had a tremendous impact on the field of mental illness in terms both of therapy and of new and different methods of care, in speedier release from the hospital, and in our ability to carry many patients in extramural programs, many of them new and made possible by pharmacotherapy. These changes in the pattern of patient care and hospitalization have in turn raised many new problems concerning the role of the community in providing treatment and rehabilitation services for the mentally and emotionally ill.

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HOSPITAL ADMISSION X RAYS IN DETECTION OF TUBERCULOSIS

THEODORE L. BADGER, M.D.

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THE SUBJECT of hospital admission X rays in detection of tuberculosis has interested me for a good many years. Dr. Hodges of the Michigan General Hospital began it in 1935, X raying several thousand patients. He found that 10 per cent had some kind of pathology; 1.3 per cent had active tuberculosis.

The trend of tuberculosis during recent years has changed. At one time the mortality was high among children. It dropped somewhat before adolescence, and then rose again in young adults between 18 and 30 years of age. Today, infant mortality from tuberculosis has dropped very low. From three years to adolescence it is also very low; then becoming higher in older males and females, particularly males. Tuberculosis has become a disease of old age rather than of youth, as it used to be. Mortality is twenty-five times higher in the older age group, although half the new cases reported are in the "under 45" age group.

In 1956 there were in the United States 14,000 deaths, 69,000 new cases, and a reservoir of 400,000 known cases needing public health supervision. It is on this tremendous reservoir that our chief focus must be in the years that lie ahead. This group includes the recalcitrants. It is out of this reservoir that our general hospitals draw many cases that are tuberculous. While these people will not report their tuberculosis, they will be hospitalized for cardiac or other disease, and a hospital admission X ray will pick them up as tuberculous cases. They will become known again to health authorities.

A few years ago, United States Public Health Service in a study of the non-hospitalized tuberculosis patient found that 45 per cent of the active cases are being treated at home. Of that number, 87 per cent had advanced tuberculosis; 48.2 percent had no bacteriological report; 25 per cent were known to be positive and 25 per cent negative. Private physicians were caring for 33 per cent; 44 per cent were under the care of public health clinics. Of the active cases, 40 per cent were without treatment of any kind, be it chemotherapy or bed rest.

In 1957 a study was undertaken in New York state to ascertain the trend in hospital discharges. This study revealed that while in 1945, 25 per cent died, 12 years later only 10 per cent died. Conversely, where 75 per cent were discharged alive in 1945, by 1957, 90 per cent left hospital alive.

This study also showed that of those discharged alive in 1945, 45 per cent of cases were arrested and 55 per cent left with active disease. In 1957, 41 per cent were inactive on discharge, while 59 per cent had active disease. This indicates that more patients are leaving hospital alive with active tuberculosis.

We find today that those treated properly, most of them in hospital, by the best modern techniques in drugs and surgery, are doing extremely well with only a low percentage of breakdown. But of the group treated at home, we are unable to speculate on how long many of them will go without breakdown.

Throughout the country as a whole, United States Public Health Service has found routine chest X ray of hospital admissions the most productive source of unknown tuberculosis cases. It has been found to be more than twice as productive as the mass community survey. In our own Boston area, nearly 75 per cent of all reportable tuberculosis cases of the past five years have been reported from hospital X-ray programs of one kind or another.

That such a program is feasible is readily determined by the experience of four of Boston's larger hospitals. Deaconess, with between 7,000 and 8,000 admissions yearly, X rays better than 85 per cent of patients on admission. City Hospital, with 30,000 admissions yearly, X rays 95 per cent on the day of admission; stretcher cases are wheeled for X ray later.

At St. Margaret's, an obstetrics and gynecological hospital, all patients are X rayed at least once during pregnancy. Special precautions are taken so radiation does not reach the pelvic area. And at Massachusetts Memorial, where 10,000 are admitted each year, 75 per cent are X rayed routinely upon admission.

A breakdown of the sources of new tuberculosis

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reveals the following as the most important: contacts with the non-hospitalized tuberculous patient, family contacts, penal institutions, mental hospitals, refugee population, older (over 40) age group, and recent tuberculin converters.

A brief word about X-ray radiation. The problem was precipitated by explosions of the atom bomb and subsequent studies in genetics. It received attention out of all proportion in both sides of the case.

We should not take X rays which are not deemed necessary. But neither can we allow so excellent a diagnostic device to fall into disuse.

There is still division of opinion as to the minimal age for the routine chest X ray. Some physicians accept a figure of 25 years of age. With a regularly monitored machine kept in perfect condition, the age could be lowered to 20. Monitoring is a matter of prime importance, and is as much a concern with machines used in community surveys, clinics, etc., as it is in general hospitals.

The initiation of a routine X-ray program must necessarily allocate responsibility for getting the patient to X ray. Customarily the resident, intern or head nurse accepts this responsibility. It requires complete co-operation of physicians and nurses. If brought up for discussion at staff conferences, it quickly becomes part of routine examinations, as is urinalysis. The interest of the radiologist is paramount, since the ultimate task is his.

The state assumes financial responsibility for the program in some areas. Many physicians feel that this is proper. Unfortunately in other places, the state has not financed such a program, or if it has, may not willingly continue support. It would be preferable to have public funds available to ensure that all patients receive the service. However, where this is impossible, the patient should be willing to absorb at least part of the expense. It can be more to his advantage than some of the other tests he may undergo. It is of perhaps even greater advantage to the hospital to locate upon admission the case of unknown infection.

The productivity of chest X-ray admission programs will be most marked:

1. In areas of high incidence of tuberculosis.
2. Where the hospital population is comprised largely of older age groups (over 40).
3. Where routine chest X rays are not a part of every complete physical examination, and every medical hospital admission.
4. Wherever the standard 14 x 17 plates are used in preference to small films.
5. Wherever the department of radiology works hand and glove with the clinical and nursing services.

Things to remember about X-ray programs:

Any program, admission or in-hospital, is only as good as its follow-up of abnormal chest films, and its co-operation with the local health department.

Whatever age limit is chosen, above which *routine* X-ray films will be taken, then those below this age should be included in a tuberculin testing program.

In the eventual elimination of tuberculosis, it is the child under 3 years with a positive tuberculin test, and the recent tuberculin converter to positive in the ages of 3 years to 20 or 30 years, who will be suitable for preventive treatment with isoniazid.

Any chest X-ray program should have for its basic concepts the knowledge a) that tuberculosis is only one disease revealed by chest X rays; b) that cancer of the lung is only diagnosed early enough for *cure* by the routine chest X ray; c) that cardiac disorders may be found first by the routine X ray and d) that industrial disease, inhalation diseases and a multitude of chronic pulmonary diseases are first diagnosed by the routine chest film.

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This group is fully aware of the implications of these developments, and you are programing your activities accordingly. Those of us who are responsible for planning new programs and devising new ways to meet the tremendous mental health needs of our country are relying heavily upon the contributions in understanding, support, and service that must be made by enlightened and interested groups of citizens. Without your support and assistance, the opportunities provided by the new drugs for caring for many patients in the community, and for speedier release and rehabilitation of hospitalized patients will not be fully realized.

However effective the new drugs may be in terms of treatment, they do not act on the patient in a vacuum. The setting in which the drugs are administered, the ways in which people relate to the patient, the attitudes of hospital staff are still of paramount importance. A striking example of this was found in one of the studies conducted by the Laboratory of Socio-environmental Studies at the National Institute of Mental Health. Investigators in this Laboratory are interested in discovering those elements in the mental hospital environment which are therapeutic. When they examined the release rates among patients admitted to St. Elizabeth's Hospital in Washington, D. C., for the first time during the period from January 1, 1953 through August 31, 1956, they discovered that patients hospitalized during 1955 to 1956, whether

or not they were treated with chlorpromazine or reserpine (the two drugs then being used there), were more likely to be released than patients who were admitted before the hospital began to use drugs. The patients included in the study were standardized for diagnostic categories, symptomatology, and previous social history. The conclusion is that the increasingly optimistic expectation of staff that patients would recover, perhaps due to successful treatment of chronic patients, had increased the probability that all patients, whether or not treated with drugs, would recover.

A follow-up analysis of the data showed that the most striking increases in release rates were among the unmarried, working-class patients—the group that previously had constituted the bulk of the chronic cases in this, as in most mental hospitals. If this change becomes general, it will have a strong influence on the social characteristics of the resident population in mental hospitals and, in turn, further improve the morale of hospital staff and their success in treatment. This may prove to be a case of "nothing succeeding like success."

Early Diagnostic and Effective Preventive Programs

A great deal of very important research is being concentrated on the therapeutic milieu, early diagnostic and treatment services, and more effective preventive programs. The development of some of these new programs and approaches may very well be a significant reason for the reduction in mental hospital patient populations. I would like to cite one example where the setting of the hospital was changed from a custodial to a therapeutic environment. This hospital, located in Pennsylvania, had been more or less typical of state mental hospitals. A homelike atmosphere was introduced, featuring increased personal privacy, less regimentation, and more patient self-care. An intensive inservice staff training program for all personnel was initiated. A broad new program of patient activities emphasized interaction among patients rather than acquisition of skill or compliance with schedules. The patients were given greater freedom of movement. They were given keys to their own building and rooms, and they were allowed to visit in town and to hold extramural part-time jobs. Preliminary results indicate that such measures are effective in rehabilitating heretofore "chronic" patients. Of a pilot group of 65 patients, whose average length of hospitalization prior to the project was thirteen years, 55 per cent were able to leave the hospital directly from the program and an additional 8 per cent were able to leave later. About 85 per cent of those leaving were still living in the community at the time of first follow-up 2 to 15 months later, and of these about 38 per cent were gainfully employed. Of the 36 patients who were able to leave the hospital under this program, only two were described as making a "poor" adjustment on the outside. Definite improvements in employee morale are also reported. The applicability and extension of such intensive and comprehensive measures hold much promise not only for acutely ill patients but also for chronically ill patients, patients who for so long comprised a major factor in the high costs of operating public mental hospitals.

Much thought and effort is being given to new ways of dealing with the problems of the mentally ill. For example, in emergency psychiatric service program has been established in Boston. When the police are summoned in cases of psychiatric emergency—such as an attempted suicide or an emotionally disturbed individual—they do not attempt to remove the sick person. Instead, they summon the emergency psychiatric team which is on call twenty-four hours a day. They are finding that this service makes it possible to reduce the number of patients who need to be hospitalized. Once the psychiatric team has provided emergency care, and incidentally has assisted in making necessary adjustments in the sick person's immediate environment which can be observed at firsthand, it is usually possible to continue the case on an outpatient basis.

Another extremely interesting new program is an experimental suicide referral service in Los Angeles. This service utilizes community agencies in obtaining referrals of suicidal patients, and both public and private treatment facilities in handling the patients. This project is becoming recognized as the center for the most comprehensive research on suicide now being conducted anywhere. The program has the complete and firm support of the community, including the Coroner's Office, the Los Angeles County Medical Society, and the police. Referrals of suicidal patients are made by such agencies as the Los Angeles Emergency Hospital, physicians in Los Angeles County, Los Angeles police, and social agencies. At the Center, patients are interviewed, tested, and then referred for treatment to the most appropriate resource in the community. The agency which provides the treatment notifies the Center about the outcome of the case. The basic purpose of this project is to discover causes of suicide and appropriate treatment for suicidal patients.

Right here in Providence, the Rhode Island Mental Hygiene Service is experimenting with a somewhat unique method of treating delinquent children. Group therapy is being used within institutions for delinquents. At the appropriate time, an entire therapy group is discharged into suitable individual living situations in the community—usually their own homes. The group, however, con-

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tinues to meet for group therapy. The project aims to make maximum use of group processes in the treatment of delinquent children. It also attempts to maintain continuity of care between the treatment center and the community.

In one program in Texas, entire families of mentally ill adolescents spend a limited period of time in intensive therapy at the Medical Center. The entire treatment team concentrates its efforts and facilities on the family as a group, as well as on individual members, in order to mobilize the family to meet the crisis. Experience with early cases has been unusually successful; many of these adolescents can now be treated on an outpatient basis instead of requiring long-term institutional care. This technique may prove useful in providing services in rural areas where psychiatric facilities are scarce or non-existent.

State hospitals in Idaho, Maryland, and elsewhere, are experimenting with the use of foster-home care for mental patients. This program gives the patients an opportunity to make a life for themselves away from the hospital and to experience the therapeutic effect of individual attention, family atmosphere, and community contact. Such foster-home or family care programs also can improved public interest, understanding, and attitudes toward mental illness, and help reduce the need for more institutional facilities.

The Council of Social Agencies in Baltimore is experimenting with the development of procedures to make the process of mental hospitalization less traumatic. Special attention is being given to the role of the police, the co-ordination of medical and social agency services, and greater use of voluntary admissions.

Other experiments are focused on the families of mental patients. One mental health clinic in Illinois is training volunteer workers to assist families with the practical problems of preparing for the hospitalization of one of their members, helping them during the hospitalization, and then preparing them for the return of their relatives. The volunteers also help find boarding home placements where this is necessary. This project is laying the foundation for a program of active community support in the total effort involved in treating the mentally ill.

Many other new methods are being tried out in connection with rehabilitation of mental patients. One hospital in New York State has established workshops as part of the regular ward program. Patients spend a short time in training and are then paid on a piecework rate. The shops contract or subcontract work from industries in New York City. The State Department of Labor and the labor unions are co-operating.

There are many other exciting new programs that one could mention, but there would not be time enough to do justice to them all.

What I have tried to do tonight is to give you a brief perspective of the more important advances, ranging over a broad spectrum of research and new developments in the field of mental health. I have mentioned physiological, psychological, and sociological studies; studies of child development and of aging; research in neurophysiology, in psychopharmacology, in the biochemistry of mental illness; and studies and demonstrations of improved methods of care and treatment of the mentally ill.

My summary of mental health advances would not be complete without mentioning the new public climate in which mental health needs are recognized and in which support for meeting these needs is available. I am particularly cognizant of the fact that all of this research and all of these studies were made possible in large part by the encouragement and assistance of dedicated groups of citizens and their leaders in all branches of Government. It is people like you who have helped to create the new favorable climate. I am therefore especially pleased to have had this opportunity to share with you this encouraging information about new developments in the field of mental health research.

WEDNESDAY,
SEPTEMBER 14
Golf Tournament
and
Annual Dinner

* * *

Providence Medical Association
at the
NEWPORT COUNTRY CLUB

ISOLATION PERFUSION OF BODY REGIONS IN THE TREATMENT OF CANCER*

Experimental and Clinical Observations

LESTER L. VARGAS, M.D.; WILLIAM P. CORVESE, M.D.; CLARENCE H. SODERBERG, M.D.; JOHN D. PITTS, M.D.; THOMAS FORSYTHE, M.D., AND HERBERT FANGER, M.D.

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EFFECTIVE CANCER CHEMOTHERAPY has been limited by the systemic toxicity of available cancerocidal drugs. Transient gastrointestinal disturbances and depression of hemopoiesis frequently results when these agents are administered in doses having only a minimal cytotoxic effect. When large doses sufficient to destroy neoplastic tissue are employed, severe systemic reactions may result in death.

In an effort to minimize systemic toxicity, and at the same time, increase the dose of the cancerocidal drug in the malignant neoplasm, Klopp and his associates[1] injected nitrogen mustard in single or fractional doses directly into an artery supplying the tumor-bearing tissue. Compression of the veins draining the region enhanced the effectiveness of the drug. In some cases, necrosis of the neoplasm occurred. However, severe local reactions precluded extensive application of the method.

In 1958, Creech and his associates[2] utilized a pump-oxygenator to isolate and maintain the circulation of certain organs or body regions. High doses of cancerocidal drugs, lethal if administered systemically, were introduced into the extracorporeal circuit and recirculated through the tumor-bearing tissues. By this means, a high specific activity of the drug could be selectively directed to the malignancy in a dosage limited only by local tissue tolerance. This technique also provided a method of controlling the metabolism of the part being perfused, by altering blood flow rate, temperature and oxygen tension of the blood. Since the alkylating agents are known to have a radio-mimetic effect, enhanced by high oxygen tensions in the tissues,[3] the method also afforded a means of increasing the effectiveness of nitrogen mustard. The encouraging preliminary reports of Creech and his associates,[4] as well as others,[5-6] suggested that wider clinical application of isolation perfusion was indicated to fully assess its value. This is a preliminary report concerned with our early experimental and clinical observations in employing this technique in the treatment of cancer.

*From the departments of Surgery (Cardiovascular Research Laboratory), Pathology, Radiology (Isotope Laboratory), and the Tumor Clinic, Rhode Island Hospital, Providence, Rhode Island. Presented at the Seventh Annual Rhode Island Hospital Research Day, April 16, 1960. Supported in part by grants from the John A. Hartford Foundation, Inc., and the Rhode Island Foundation (Phoebe Parker Fund).

Methods

Two groups of experiments were performed. In the first group, unselected mongrel dogs, weighing 45 to 51 pounds, were anesthetized with fluothane. The common femoral artery and vein were exposed in the thigh and cannulated distally with appropriate sized plastic catheters. Each vessel was occluded proximal to the catheter with an atraumatic clamp and the thigh was also tightly encircled with a rubber tourniquet. Each animal was anticoagulated with heparin. The cannulae were connected to a pump-oxygenator, which has previously been described.[7] The oxygenator was primed in each experiment with 800 cc of fresh heparinized blood from a donor animal. A Brown-Harrison heat exchanger was used to maintain the temperature of the perfusate 2 to 3 degrees above the body temperatures of the experimental animals. Perfusion of each extremity was carried out at an arterial pressure which was deliberately maintained 25 to 30 mm. Hg. below the systemic arterial pressure. The flow rate varied from 200 to 250 ccs. per minute depending upon the size and weight of the animals. The duration of perfusion varied from 70 to 90 minutes. After establishing a steady state of perfusion, a fixed amount of radioiodinated human serum albumin was rapidly introduced into the extracorporeal circuit. Serial blood samples from the systemic circulation were then obtained at five-minute intervals during the entire time of perfusion. In this way, the extent of mixing of the perfusate with the systemic circulation could be

continued on next page

calculated. At the completion of each experiment, the heparin effect was neutralized with polybrene.

A second group of experiments was performed employing eight unselected mongrel dogs, weighing 35 to 60 pounds. Our purpose in this series was to determine the rate of leak of perfusate into the systemic circulation when the pelvic vasculature was isolated and perfused. Pelvic perfusion was achieved by occlusion of the aorta and vena cava below the origin of the inferior mesenteric artery with suitable atraumatic clamps. The femoral vessels were exposed in the leg and cannulated proximally with plastic catheters. Tourniquets were applied distally to the cannulated vessels and to the opposite thigh. Isolation perfusions were performed for one hour in the same manner as those described for extremity perfusion. The rate of leak was determined by sampling from the systemic circulation after adding a known quantity of radioiodinated human serum albumin to the extracorporeal circuit. In one animal, the pelvic perfusion circuit was studied by cineangiography. A bolus of 50 cc of 90 per cent Hypaque was rapidly introduced into the arterial cannula after the perfusion had been stabilized. Its course through the major circuit and the collateral vessels was then carefully followed with an X-ray image intensifier and cinematography.

Experimental Observations

A balanced stable perfusion was accomplished without difficulty in every limb and pelvic perfusion. Presure-flow relations followed a predictable pattern. When a pressure slightly below the level of systemic arterial pressure was established, the flow rate which varied from 200 to 250 mm. of Hg. in the limb perfusions and from 350 to 400 cc in the pelvic perfusions, remained constant.

Two animals were deliberately sacrified at the completion of the experiments. All other animals survived.

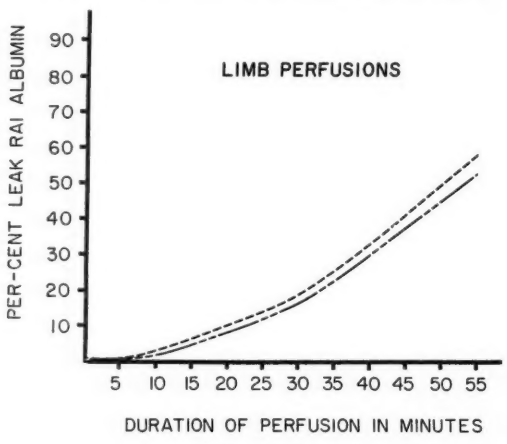

FIGURE 1

The per cent of leak of radioactive material from the perfusate into the systemic circulation during limb perfusion when the common femoral vessels were cannulated in two experiments was 31.8 and 32.5 at the end of forty minutes (Figure 1).

As might be expected, the leak through collaterals in pelvic perfusion was greater and more variable. At the end of forty minutes, 32 to 74 per cent of the radioactive indicator was recovered from the systemic circulation (Figure 2).

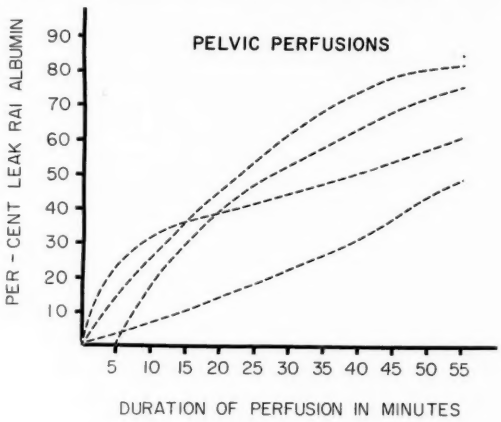

FIGURE 2

Radiographic studies revealed several technical errors that undoubtedly accounted for the greater extent of mixing of the two circulations in some of the experiments. After these errors had been corrected, further studies utilizing cineangiography showed that the pelvic tissues were thoroughly perfused, even through relatively small vessels. It was also apparent from these studies that a major source of leak occurred through the deep inferior epigastric arteries.

Encouraged by our preliminary laboratory experience, and by the reports of others,[4-6] we applied the method clinically in one case.

Case Report

E. M. (R.I.H.—630965) A sixty-four-year-old woman had had a malignant melanoma widely excised from the plantar aspect of her right foot four years before admission. Three weeks later, a right radical groin dissection was performed. Pathological examination of the excised lymph glands did not reveal any metastatic neoplasm. One year after her original operation, metastatic skin nodules in her right thigh appeared and were excised. She was subsequently treated with Thiotepa to which she became sensitized. The occurrence of further skin metastases confined to the right lower extremity

without evidence of distant metastases led to her admission for isolation perfusion therapy on February 12, 1960.

Examination disclosed a moderately obese woman. Blood pressure was 150/94 mm. Hg. There was a long irregular depressed scar over the right femoral triangle. There were several amelanotic raised skin lesions in the thigh varying in size from 8x8 mm. to 9x14 mm. No recurrent lesions were present in the region of the primary tumor. The chest X ray did not reveal evidence of metastases. Hemoglobin was 12.9 grams and the white cell count was 3.600 with a normal differential. All other studies were within normal limits.

Preoperatively, Lugol's solution was administered to prevent thyroid uptake of radioactive iodine. On the day of operation, 500 cc of blood was drawn from the patient while a similar quantity of banked blood was infused intravenously.

On February 17, 1960, regional perfusion of the right lower extremity was performed. The common femoral artery and vein were exposed in the groin with considerable difficulty because of old scar. Systemic anticoagulation was achieved by the administration of 1 mgm. of heparin per pound of body weight. Appropriate sized plastic cannulae were introduced into the vessels and directed distally into the extremity. A tight tourniquet was applied to the upper thigh at the groin (Figure 3).

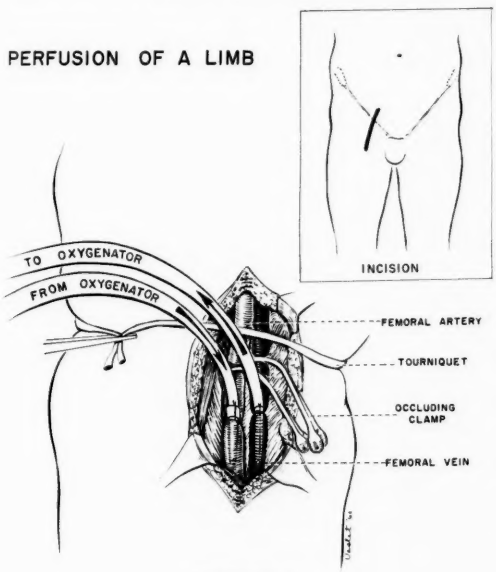

FIGURE 3

The pump oxygenator was primed with 500 cc of the patient's own blood, which had been drawn earlier in the day, and 500 cc of bank blood. The cannulae were connected to the pump and the perfusion started. After stabilizing the arterial flow at 300 cc per minute, an aliquot of radioactive albumin was added to the oxygenator. Serial samples of blood from the systemic circulation were then drawn at five-minute intervals to monitor the rate of leak of perfusate. An initial dose of 20 mgm. of nitrogen mustard was injected into the oxygenator followed at intervals of ten minutes by two additional doses of 10 mgms. each. We had originally planned to give a total dose of 60 mgm. which represented twice the maximum whole body dose. A leak of 35 per cent after twenty minutes of perfusion, however, led to our decreasing the dose of nitrogen mustard. Perfusion was discontinued after forty minutes and the patient's venous clotting time restored to normal by neutralizing the circulating heparin with polybrene. The cannulae were removed, the vessels were repaired with fine silk, and the wound was closed.

Convalescence was uneventful. There was a low-grade febrile response lasting twenty-four hours and anorexia was present for four days. The patient was out of bed and walking on her first postoperative day. The only hematological change suggesting nitrogen mustard toxicity was a drop in platelets to 105,000 from a preoperative level of 160,000. Objectively, all the skin lesions showed an erythematous blush for several days, postoperatively. Biopsy of one of these lesions, one month after perfusion, showed histological evidence of nuclear degeneration. Three months have elapsed since operation and all but one of the skin lesions have disappeared.

Comment

The safety of isolation perfusion of malignant tumors with cancerocidal drugs depends upon the rate and amount of mixing of the perfusate with the systemic circulation. Our animal experiments indicated that the degree of mixing of the two circulations was variable and unpredictable. Since high doses of cytotoxic drugs must be employed in the extracorporeal circuit if they are to have a destructive effect upon the tumor, it would appear essential that the rate of mixing of the two circulations be continuously monitored in every case. In this way, the dose of the drug can be modified or the perfusion discontinued before systemic poisoning occurs.

Our experiments also indicate that the isolation of a vascular bed can be made more complete by extending the surgical procedure to include ligation of some of the larger collateral vessels. This was apparent in pelvic perfusions where a large leak was demonstrated through the deep inferior epigastric vessels. Occluding these collaterals as well as others would permit the use of larger doses of cancerocidal drugs and longer periods of perfusion.

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MEDICINE AND THE HOUNDS*

JOHN L. BACH

The Author. *John L. Bach, of Chicago, Illinois. Director, Press Relations, the American Medical Association.*

MY SUBJECT TODAY revolves around words and how they are used in medical communication.

We live in an ocean of words, but like a fish in water, we're not often aware of it.

There are many complex medical terms, such as "socialized medicine," "third parties," "physician-patient relationship," and "freedom of choice," that find their way into newspapers and magazines today. In this era of socio-economic consciousness, these words are bandied around to the point that they reduce an honest truth-seeker to despair. Such terms . . . and words . . . should be used with caution, for no two people mean the same thing by them.

If I can clarify a few principles and disciplines in the broad medical communication process to show *how to say what we mean* and *how to evaluate what we hear,* then I believe my efforts on this platform today will not have been in vain.

Words link together all human activities, and form a connecting bond in every human relationship.

Words are important in medical communication, just as they are in any other branch of science. What a doctor knows or discovers must be relayed in writing or speaking to his colleagues as well as to the general public—his patients.

What he says and how he says it carry wide ramifications.

The practice of medicine has often been close to word magic; for example: the word "arthritis" can cripple as many people as the disease itself, while to tell a patient he is suffering from "pernicious anemia" can make him feel more sick than he needs to be. The word "glaucoma" can be packed with terrifying fear in talking with patients. Possibly the doctor can just as well refer to pressure within the eyeball—a much softer term—which will benefit the patient, at least in the beginning, since nervous and emotional imbalance is often associated with this condition.

When talking to their patients, physicians today would find it challenging to use their own words to describe a condition; rather than have the disease correspond to words.

On this point, however, the physician does not stand alone. Anyone connected with medicine and its allied fields—nurses, doctors' wives, technicians, drug salesmen, pharmacists, and secretaries—must rely on words in everyday communication. But what they say and how they say it carries a grave responsibility. The words all of these people use can be responsible for either happiness or untold misunderstanding and misery.

In short, their words can reflect either good or bad public relations for the medical profession.

I am more concerned at the moment, however, with the problem of how to evaluate what we, in medical communication, hear from our reformers and critics on all sides.

As a medical writer, I am supposed to understand the behavior of language for I have spent most of my working life in deciding the sequence in which one word follows another. Writers, generally, whether they fall in the professional class or whether they are housewives or truck drivers bent on expressing themselves, are no more accustomed to question language and its meaning than to question the weather. Most writers assume that they always know exactly what they mean and that people who don't understand them should polish their wits.

But I ask you: Is the reader at fault for not understanding? Hardly.

Consider for a moment the long and heated discussions which medicine has on all kinds of subjects: cost of medical care, hospital costs, insurance plans and doctor fees, indigent programs, maternal and child welfare, social insurance, compulsory cash sickness benefits, unemployment compensation, the Forand bill and social security, aid to dependent children, veterans medical care—and I could list many more. These are subjects which medical people are vitally interested in writing and talking about. In doing so, we set the stage for other outside writers to move in. That is natural because our interests and decisions affect not only

*An address delivered at the Conference of Medical Service Representatives at the 149th Annual Meeting of the Rhode Island Medical Society, at Providence, Rhode Island, May 10, 1960.

every man, woman, and child, but they also affect all their pocketbooks. Is it any wonder then that our problems and decisions make news?

When editorial writers, journalists, science writers, radio and TV newscasters, government officials, lawyers, labor leaders, judges, professors, welfare agencies, and a host of others begin writing about us, medicine's language problems multiply. All of these people, collectively, have been bombarding us with words for years—words that affect medicine and the profession. It's almost needless to say that they, too, find medicine's problems worth writing and talking about.

How can we, at times, challenge members of this great "writing" fraternity on some of the things they say?

How can they—the outside writers—and we—the representatives of medicine—help to clarify the meaning of certain words and phrases?

This would be a stupendous job because it is difficult for people, especially writers, to agree on anything. However, when people can agree on the things to which their words refer, minds meet, and the medical communication line is cleared. That is axiomatic.

When words deal with such simple things, as directions, commands, descriptions, the difficulty of understanding is not great. But when we hear words on the level of ideas and generalizations—so common in speaking about medicine and the profession—people are affected. They can cheer, they can grow angry, they can even storm the A.M.A. barricades; yet for the most part we do not know what the other fellow is saying.

As Doctor Elmer Hess, past president of the A.M.A., once said after listening to testimony at a Washington hearing, "Everybody's talking, but nobody knows what he's talking about."

We, on behalf of medicine can do better than that by studying the sentence structure and meaning of the following exhibits:

Exhibit No. 1

Democratic Representative David S. King of Utah, lashing out against fluorides in drinking water and food, had this to say in the NEW YORK WORLD TELEGRAM AND SUN after introducing a bill in Congress in which he expressed concern over the declining health of Americans:

"America's health is in danger," he said, "and if the warning signals apparent to all are not heeded, we risk physical and mental deterioration and inevitable capitulation to the virile and more rugged peoples of the world."

What is he talking about and what does he mean? For one thing, he states flatly that "America's health is in danger." That's his opinion, but what does he offer to prove it? Nothing! Note, too, how he plays on the emotional word, "danger." In his communication to the public, he covers an enormous field—a typical example of a responsible man's failure to assemble the main facts before passing judgment. Prejudice, as in this case, is a great timesaver; it enables people, especially bureaucrats, to form opinions without bothering to get the facts.

Exhibit 2

Mike Gorman, former Washington press agent and now a self-acclaimed expert on mental illness, testified recently before a Senate Monopoly and Antitrust subcommittee, and he was reported by the NEW YORK TIMES as saying:

"That drug makers had taken an arrogant attitude toward the problem of providing better and cheaper drugs for persons who are seriously ill and poor. He said the drug houses, instead, were concentrating on medications for the paying neurotic, sometimes doing little more than changing the color of a tablet to 'push' it."

Again, where is his proof? This statement falls in the category of "spurious identification." This No. 1 communication failure has been common on the front pages of newspapers in the form of guilt-by-verbal-association.

When you analyze Gorman's statement the verbal trickery comes out. The drug makers are identified with the "seriously ill and the poor," with a strong implication that they also are greedy and mercenary.

With this kind of monstrous logic it is possible to "prove" anyone guilty of anything.

One road to understanding is to rely more on facts, less on opinion.

Exhibit 3

The former Secretary of Defense Charles E. Wilson once was quoted as saying: "Basic research is when you don't know what you are doing. Who cares what makes grass green or fried potatoes brown?"

Here Mr. Wilson played the role of the talking animal; not the reasoning animal.

If Mr. Wilson had analyzed only one part of his question, "who cares what makes grass green?," he would have learned that every animal, including man, cares. The "greenness" of grass and other plants is due to chlorophyll. The secret of how chlorophyll really works remains a mystery. Solving this riddle could open untold new horizons for man.

Mr. Wilson apparently was not thinking when he made his off-the-cuff remark. Most of us are not too logical, most of the time. Words run into feelings, feelings into words.

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Exhibit 4

A woman reader wrote a *Voice of the People* article in the Pawtucket, R. I., TIMES about the Sabin vaccine.

She asked if the profit motive was the villain in this drama, and then asked, among other things:

> Why the Sabin vaccine was tested in Russia and other countries before being used in the United States?
>
> Was the Sabin vaccine withheld from us in order to protect the investment of the big drug monopolies who were engaged in the manufacture of Salk vaccine, which they hoped to unload on the public at high prices, before the cheaper method could supplant it?
>
> Did the American Medical Association withhold its approval from the Sabin method, thus allowing the Socialist countries to take the lead in pioneering its use?

Had this woman taken the time and trouble to make one or two phone calls, she would have learned quickly that the Sabin vaccine was not mass field tested in the United States because so many Americans had already been immunized by the Salk vaccine that statistically reliable tests on a large scale would be difficult, if not impossible. The testing had to be done in countries not widely Salk-vaccinated.

The American Medical Association has nothing to do with the approval or disapproval of the Sabin vaccine, the Salk vaccine, or any other drug product. This job rests with agencies of the United States government; not with the A.M.A.

Her near libelous references to "monopolies," "profit motives," and "high prices" are the most difficult to refute in the eyes of the public because they are based strictly on personal opinion and broad generalization.

This woman was talking with her eyes shut and telling us nothing worth listening to. I have a kind of inner feeling that this lady writer is supporting something that I could believe in—everybody is against monopolies; profit motives, especially if they are sinister, and prices, especially if they are high and exorbitant, but the hailstorm of wild abstractions is so severe that I can form no clear picture of her argument. Consequently, her words turn out to be a mouthful of mush.

Exhibit 5

This one involves a member of our own family —a prominent physician from New Jersey—who found himself in the publicity spotlight several months ago when he said that "the prices of medicines could be lowered if drug firms gave up the circularizing of 200,000 physicians with literature which, in many cases, 'is never read.'"

This doctor has since seen his statement quoted many times by critics of the pharmaceutical industry; especially those who have been prominent in the Kefauver drug price investigation in Washington. They have been using it, publicity-wise, to good advantage, much to the embarrassment of the drug industry at a time when their corporate practices, so closely aligned to the medical profession, are being placed under the microscope of public opinion.

The chief meaning that I can wring out of the doctor's statement is that he is personally annoyed at receiving drug company brochures, and that the cost of drugs would be much less if this common practice were stopped. But is he on sound ground? Words such as his make things so much harder than they need to be, hurt so many more people than need to be hurt, stir up so much needless controversy.

Had this doctor done more research to support his own personal views, he would have learned that he was skating on thin ice. The February 16, 1957, issue of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION had this to say editorially on the subject, which takes the wind out of the doctor's argument:

> "Pharmaceutical advertising (and that includes literature) is probably the least understood. It has often been said that drugs could be sold for much less if the cost of advertising were not added to the original cost of preparation. This fallacy should be dispelled. Most ethical drug firms spend an average of 5% of retail sales to inform the medical profession of their products. If the cost of advertising were eliminated completely, a 50-cent capsule could then retail for about 48 cents. Unfortunately, the elimination of advertising cost precludes the means necessary to produce the volume sales without which the cost of the capsule could not have been brought down to the 50-cent selling price. In other words, the mass-produced and widely used capsule is the eventual result, rather than the cause, of advertising to the medical profession."

Exhibit 6

A physician, writing in the California Medical Association NEWSLETTER, mixed medicine with democracy in the following paragraph:

"In organized medicine, the structure of democracy is present, though geared to the relatively slow pace of scientific research and to the improvement of standards of medical education, professional competence and patient care. These scientific goals of medicine are clear, communications concerning scientific advances are excellent and their application to patient care extraordinarily effective. The

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Editorials

ONLY ONE NEGATIVE VOTE

ELSEWHERE IN THIS ISSUE appears the report in summary form of the medical, public health and allied legislation before the Rhode Island General Assembly during its recent session from January to May. Every member of the Society should read the report.

In an editorial in our March issue (EMOTIONALISM, p. 181, March, 1960), we posed among other questions this one: "Have our leaders completely lost contact with the art of reflection which in turn calls for complete understanding of the subject to be considered?" The action of the recent General Assembly on a legislative proposal that would allow chiropractic physicians to render "medical care" to recipients of public assistance leaves us with the impression that the answer is "yes" as applied to our current state legislators.

For two years now the governor has had to veto this legislative proposal. In 1959 a public hearing was held at which the state departments of health and social welfare, in addition to the medical society, speaking for the public in general and not themselves, voiced clear, understandable, and unopposed reasons why no such legislation should ever be put on our statute books. This year the medical society made a mailing direct to each member of the General Assembly and in that mailing the following statements were made:

"1. The Rhode Island Medical Society defers to no one in its sincere desire to insure that the men, women, and children who depend upon the state through its Department of Social Welfare or any of its various agencies rendering health and welfare services, obtain the finest care that American medicine can provide.

"2. It should be clearly understood that chiropractic is no part of medicine. Chiropractic is recognized by state statute as a limited phase of the healing art, and licensees may not practice medicine. They may not prescribe drugs for internal medication, nor may they perform surgery. They have no hospital training, nor hospital affiliations.

"3. The public at large is free to consult non-medical practitioners but by so doing they assume their own individual responsibility if the results of such treatments are unsatisfactory. This is not the case with recipients of public assistance, for they are utilizing public funds and are dependent upon the state to aid them and to guide them.

"4. Therefore, the state, through its duly appointed agencies, has an obligation to protect these recipients, and to insure that they shall obtain the finest care, not just care of their own choosing which may be below the norms established by the majority of their fellow citizens. The Supreme Court of this state, many years ago, made clear that the medical statute is to secure the safety and protect the health of the public.

"5. The state delegates to its official agencies rights to establish regulations to carry out the purpose of the various programs under the jurisdiction of the respective agencies. The Department of Social Welfare is duty bound to impose strict regulations, and it does impose them, upon doctors of medicine and osteopathic physicians in respect to the administration of services compensable under its public assistance programs. It likewise is bound to safeguard the funds of the public and to guarantee to the Assembly and to the people of Rhode Island that it is using those tax funds to insure the finest care that is available in our communities. There can be no compromise with that position."

In spite of the fact that the Assembly itself restricted the chiropractor because of his limited educational training in the healing art, all but one of the current legislature were willing to allow such practitioners to render "medical care" to sick persons dependent upon the state for guidance and aid in securing the best possible care for their ailments!

It is to the credit of Representative Thomas W. Pearlman of Providence that he—and he alone—recorded his vote in opposition to the passage of the bill.

If the legislators passed the measure as a political maneuver to embarrass the governor, forcing him to exercise his veto power, then they are the more to be criticized for political manipulations at the expense of the protection of the health of a sizable segment of the public.

EMPLOYMENT FOR THE "AGED"

In the midst of all the political chanting about the plight of the medical care of the aged it is noticeable that little thought is given to the problem of providing work for the older age citizen who is well and able to work, so that he may be in a better position to cope with all his financial matters as he reaches his three score and ten.

The federal government, by some mystical method, decided years ago that the age 65 was the retirement age for benefits under the social security system. Ever since the public has been indoctrinated with the idea that at the age 65 one imme-

concluded on next page

diately stops working, draws a subsistence payment from the "security" fund, and is happy ever after. But man was not created to loaf. His life is one of achievement, however humble, and the inner satisfaction of accomplishment, of productive activity, is a far greater tonic to the better life of the older age citizen than all the medicines that man can devise.

But who is doing anything about getting work for the man over fifty years, to say nothing of capable workers in their sixties? Not the politicians.

Take our own General Assembly for example. A resolution memorializing Congress to amend the social security law to make the benefit (retirement) age for women 57 instead of 62, and men 60 instead of 65, won almost unanimous support. But a proposal to have a legislative council study the employment conditions in Rhode Island, particularly as to why a man cannot be hired at the age of 50 to 60 years after he has been laid off from other employment, was left in committee files.

Organized medicine was alone for a long time in the battle to gain recognition for the handicapped until the war situation created a manpower problem, and brought into clear focus what doctors had long maintained—that handicapped persons were still employable, and that they would make excellent workers.

At its national meeting in Miami in June the House of Delegates of the American Medical Association declared one of the most vital points in the current old age issue when it stated that:

the Association would increase its educational program regarding employment of those over 65, emphasizing voluntary, gradual and individualized retirement, thereby giving these individuals not only the right to work, but the right to live in a free society with dignity and pride.

RHODE ISLAND AUXILIARY HONORED

Thirteen years ago last February the president of the Rhode Island Medical Society presided at the organization meeting to establish a Woman's Auxiliary to the Society. In the intervening years the Auxiliary has grown in stature to command attention as one of the outstanding groups in the state, and it has expanded its activities widely into our communities.

It was a foregone conclusion that ultimately the work of our Rhode Islanders should attract national attention. Two years ago Mrs. H. Frederick Stephens, a past president of the Auxiliary, was named Eastern Regional chairman of the national auxiliary's important committee on civil defense, a position she has discharged with distinction, as the record clearly indicates.

Now the Woman's Auxiliary of the American Medical Association has selected for its Eastern Regional vice president our Mrs. Hannibal Hamlin who headed our state auxiliary in 1957-58. The choice is an excellent one and the eastern region, encompassing Delaware, New Jersey, Pennsylvania, Maryland, District of Columbia, New York, Virginia and West Virginia, in addition to our New England states, will benefit greatly.

Long active in volunteer work and community activities, Mrs. Hamlin brings to her new national office a fine background of leadership in the Rhode Island Maternal Health Association, the Rhode Island Hospital Guild, the Museum Associates of the Rhode Island School of Design, our own Woman's Auxiliary, and experienced participation as a member of many community committees.

We salute the Auxiliary of the American Medical Association for its choice of such an outstanding person as its first Rhode Island officer in its thirty-seven-year history, and we felicitate Mrs. Hamlin and wish her every success during her twelve-month tenure of office.

MRS. HANNIBAL HAMLIN
of Providence, Rhode Island
Vice President, Eastern Region, Woman's Auxiliary to the American Medical Association

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MEDICINE AND THE HOUNDS

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democratic process in medicine has been supremely successful in applying scientific advances to patient care."

Everything might be clear to the good, well-meaning doctor, but what he says is not clear to the reader. He has clouded his thinking with foggy meaning and passed it on to the reader, hoping somehow that understanding will come through.

Whenever you see "democracy is," throw up your guard. "Democracy-in-general" is a treacherous term because it means many things to many different people.

If we are to talk sensibly about democracy we should begin by asking: What kind of democracy? Where? When? Shall the kind be political as in nation, industrial as in a labor union, or social as in a club? What about place and time?

When a writer mixes democracy with something equally as complex, medicine, you can be sure he will come up with a verbal nightmare where minds cannot meet, agreement cannot be reached, and the communication line is plugged.

What do all of these exhibits have in common? What failures in medical communication do they point up?

The common thread running through the word-fabric of all of them is failure on the part of the authors to assemble the facts before passing judgment. The exhibits show a skillful attempt to make words mean something different to the reader from what the facts warrant. In nearly every instance, the writer or speaker didn't bother to "research" what he was talking about. He was simply content to plot one or two points and then ride off in all directions.

All of the exhibits demonstrate alarmingly and conclusively that many responsible people do not know what they are talking about.

Before, and immediately after, the turn of the century, this kind of thing did not make so much difference. Men were busy overriding a continent, and words could not seriously deflect the course of hustling and driving action. But those of us who have lived through wars, depressions, and now space-age antics, along with such productions as drug cost investigations, and preposterous money give-away programs for older people, look at the headlines in newspapers and ask ourselves: what is the matter with people?; what has medicine or the profession done?; what are people saying?; what is the matter with government?, and, finally, what is the matter with me?

Medicine in all branches is receiving more publicity, good and bad, than it ever did before. The A.M.A. recently checked all stories pertaining to medicine in one afternoon's edition of the WASHINGTON STAR and they totaled more than 100 column inches, an amazing figure. From this heavy file of clippings, one couldn't help but get the impression that everybody in Washington is either writing or talking about some segment of medicine or medical care.

American medicine today has many critics and, like hounds hunting by scent, they are alert to jump on every weakness, whether real or imaginary. The critics, and usually the same ones, speak out time after time . . . always bitter, always critical, but hardly ever applying rational semantics to logic. They are past-masters in knowing how to cloud cuckooland, another term for over-generalization.

The point, however, is that what they write and talk about does have grave impact on the public relations image of American medicine and its allied agencies.

At this point you may be asking: how does all this affect me?; why do you tell me these things—I am no expert in medical public relations.

You may not call yourself an expert any more than I do, but YOU ARE an important cog in medicine's public relations machine. Every human being, consciously or unconsciously, is the director of his own public relations. In the individual, we call a successful result character, or, sometimes, personality.

Your character . . . your personality . . . within your own community can help medicine immeasurably.

Be on the constant lookout for stories, articles, and speeches that reflect the critical, negative side of medicine. Be on the watch for failures of meaning, at least alert to the grave difficulties of communication. If you are on your guard for communication failure, locally, many conflagrations with national impact could hardly start.

Do not let negative statements stand unchallenged to poison the minds of the public-at-large, thereby molding public opinion against us. Remember that public opinion represents the combined thinking of ALL people—your next door neighbor, the grocer down the street, the barber, and taxi driver, the druggist on the corner, and most of the other people in your county and beyond it.

When you see a story in your newspaper or the report of a speech that presents only the negative side of a medical issue or problem, analyze it carefully. Ask yourself: can this be true? Research it thoroughly. Check your best sources of information, one of the best of which is the executive secretary of your state medical society. Then, when you are sure of your ground and you possess all the facts; when you know you have valuable, specific information to counter your reformer's gobbledygook, do something about it. Refute the article you see in print by writing a positive and

constructive piece of your own for the *Letters to the Editor* of your newspaper if you have no better outlet. If it is a speaker you go after, challenge what he said in the same kind of column. Or if there is a question-and-answer period when the speaker finishes, be sure to take advantage of it.

If you do this, you will soon find that you are on the way toward very definitely creating a new appreciation of your importance and value to the medical profession at the local level.

Don't always depend on someone else — the A.M.A. or the state medical society — to answer medicine's reformers and critics. The job is much too big and widespread to depend on one organization or one group. It is our responsibility, individually and collectively, to answer our critics, especially when they use all kinds of verbal monsters to make common sense obsolete. No one is going to care about the problems of the medical profession if we—the people in his audience—sit back and wait for others to come to us.

Can we ever hope to find agreement in the more troubled and perhaps more complicated fields of medicine? Not unless we can talk and write clearly. Good language alone will not solve all of our complex problems, of course. But seeing the things behind the names in the news will often help us and our neighbors to understand the structure and befuddled environment in which we live today.

ISOLATION PERFUSION OF BODY REGIONS IN THE TREATMENT OF CANCER

concluded from page 451

The response observed in the metastatic skin lesions of the patient described above, although not dramatic, suggests that this method of treatment may prove to be of value. At this time, the technique has been used primarily for palliation of malignant disease. However, its use as an adjunct to surgical extirpation or radiation may contribute toward increasing the cure rate for certain malignant tumors.

SUMMARY

Regional perfusion of the pelvis or of an extremity with an extracorporeal circulation affords a method of utilizing high doses of cytotoxic drugs with minimal danger of systemic poisoning in the treatment of certain malignant lesions. The rate of mixing of the perfusate with the general circulation, however, is variable. To provide maximum safety for the patient, it is necessary to monitor each perfusion with a suitable indicator. Extending the surgical procedure to include ligation of some of the major collateral vessels makes for more complete isolation of the area and further increases the safety of the method. A clinical case of recurrent amelanotic melanoma of an extremity is presented to illustrate the technique of isolation perfusion with a cancerocidal drug.

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SUMMARY OF MEDICAL, PUBLIC HEALTH and ALLIED LEGISLATION BEFORE THE RHODE ISLAND GENERAL ASSEMBLY, JANUARY SESSION, 1960

Report of the Committee on Public Laws

THE COMMITTEE on Public Laws, with the assistance of the executive officer of the Society, carefully reviewed all legislation presented to the General Assembly during the 1960 sessions that related to medical, public health, or allied services, as well as welfare legislation in general. The Committee made known its views on certain proposals by direct communication to the members of legislative committees, and to the governor.

Once again, in spite of a mailing to every member of the Assembly a bill was passed by both branches to allow chiropractic physicians to render "medical care" to recipients of public assistance. The bill was vetoed by Governor Del Sesto. In its brief to the members of the legislation the committee made the following presentation:

> The Rhode Island Medical Society defers to no one in its sincere desire to insure that the men, women, and children who depend upon the state through its Department of Social Welfare or any of its various agencies rendering health and welfare services, obtain the finest care that American medicine can provide.
>
> It should be clearly understood that chiropractic is no part of medicine. Chiropractic is recognized by state statute as a limited phase of the healing art, and licensees may not practice medicine. They may not prescribe drugs for internal medication, nor may they perform surgery. They have no hospital training, nor hospital affiliations.
>
> The public at large is free to consult nonmedical practitioners but by so doing they assume their own individual responsibility if the results of such treatments are unsatisfactory. This is not the case with recipients of public assistance, for they are utilizing public funds and are dependent upon the state to aid them and to guide them.
>
> Therefore, the state, through its duly appointed agencies, has an obligation to protect these recipients, and to insure that they shall obtain the finest care, not just care of their own choosing which may be below the norms established by the majority of their fellow citizens. The Supreme Court of this state, many years ago, made clear that the medical statute is to secure the safety and protect the health of the public, when it stated:
>
> "It (the statute) is based upon the assumption that to allow incompetent persons to determine the nature of disease, and to prescribe remedies therefor, would result in injury and loss of life. To protect the public, not from theories, but from the acts of incompetent persons, the legislature has prescribed the qualifications of those who may be entitled to perform the important duties of medical practitioners. The statute is not for the purpose of compelling persons suffering from disease to resort to remedies, but it is designed to secure to those desiring remedies competent physicians to prepare and administer them."
>
> The state delegates to its official agencies rights to establish regulations to carry out the purpose of the various programs under the jurisdiction of the respective agencies. The Department of Social Welfare is duty bound to impose strict regulations, and it does impose them, upon doctors of medicine and osteopathic physicians in respect to the administration of services compensable under its public assistance programs. It likewise is bound to safeguard the funds of the public and to guarantee to the Assembly and to the people of Rhode Island that it is using those tax funds to insure the finest care that is available in our communities. There can be no compromise with that position.

Yet only one member of the Assembly, Mr. Pearlman in the House, recorded a vote opposing passage of this legislation!

As was the case a year ago, with both the Senate and the House controlled by the Democratic party, and the governor the lone Republican officer, some of the legislative proposals introduced and reintroduced this year in spite of a veto a year ago, were apparently presented for political purposes rather than directly in the interest of the people of Rhode Island.

A summary of some of the legislation in which the committee on public laws of the Society was particularly interested follows.

Legislation Enacted

Legislation enacted by the Assembly and either signed by the Governor, or allowed to become law

without his signature, included the following: An appropriation of $50,000 for the Higher Education Assistance Corporation, one for $2,000 for support of the American Legion Bloodmobile Program, and one for $5,000 to aid the blood procurement program of the Veterans of Foreign Wars; $6,000 to assist Bradley Home with its 1959 operating deficit, and $131,920 to Rhode Island Hospital for partial reimbursement for the cost of facilities available to state medical indigent patients; an act providing $200,000 for the erection of girls' dormitories at the P. I. O'Rourke Children's Center; and an act removing the salary of the state director of health from a statutory provision.

Resolutions passed included one endorsing the Forand Bill in Congress for hospital and surgical benefits under the social security system, the resolution being passed the day it was introduced and with no public comment permitted prior to passage; one opposing any efforts to diminish the Veterans Administration services in Rhode Island; one asking the Rhode Island Congressional delegation to seek enactment of amendments to the social security law to make the retirement age of men 62 years, and women, 57 years; one memorializing Congress to enact legislation amending the social security law so that all four federally aided categories of public assistance (old age, aid to the blind, dependent children, and permanently and totally disabled) shall be governed by a uniform one-year ceiling on residence requirements; and one in tribute to the late Doctor F. J. Hemond, West Warwick physician.

Insurance programs to win approval included one to provide for state paid medical, hospital, and surgical insurance for classified and unclassified state employees earning less than $7,000 annually; one providing group life insurance benefits for state employees; one fixing the limit of 85% of average weekly wage, up to a maximum of $62, on the combined benefits that may be received by any worker under the Temporary Disability Insurance and Workmen's Compensation programs; one allowing recipients of Temporary Disability Insurance to collect dependency allowances of $2 weekly with the total not to exced $8 weekly, for each child over 15 who is incapacitated by mental or physical disability; and one providing for the establishment of non-profit optometric service corporations, similar to Blue Cross and Physicians Service, and the Dental Service Corporation.

In the field of workmen's compensation several measures were passed, including one that increased the maximum payments for total disability from $32 to $40 weekly; one that relieves the injured employee of personal liability for payment of doctors', dentists', and hospital bills in cases where the right to collect from the employer has been forfeited because of non-compliance with the law; one defining the terms "general employer" and "special employer"; one that provides that in cases of undiscovered physical or mental impairment due to injury, including disease, the time for filing a claim shall not begin to run until the injured worker know or should have known of the impairment, or after disablement, whichever is later.

Among other acts passed was one requiring cities and towns to pay such medical, surgical, dental, optical or other attendance or treatment, nurses and hospital services, medicines, crutches, and apparatus, for police officers and firemen regularly employed who shall be wholly or partially incapacitated by reason of injuries or sickness contracted in the performance of their duties; also an act to provide pay increases for medical examiners; to extend the time for a commission report on legislation to guard against harmful chemicals; an act to provide a uniform narcotics statute; and a resolution extending participation in the New England board of higher education regional plan for medical education, and appropriating $12,500 for scholarship purposes, a bill raising the fees for issuance and renewal of licenses for certain business and professions, with the medical fee set at $50, and the renewal raised from $1 to $5; and a bill imposing a tax on intangible personal property.

Acts Vetoed by Governor Del Sesto

Acts passed by the Assembly and vetoed by the governor included, in addition to the one that would allow chiropractors to render "medical" service to public assistance recipients, included the following: A proposal for a legislative commission to study the need for a medical school in the state, and providing a $5,000 appropriation; two workmen's compensation acts, one to permit extra compensation for loss of bodily function or senses other than hearing or sight, partial loss or stiffness, and for bodily disfigurement, and the other to allow employees who win contested benefit cases compensation for attorney, medical and other expert fees; a bill to establish a Health Insurance Board to administer a voluntary contributory plan of hospital-medical insurance for state employees and their dependents; a bill that would require registration of social workers with postgraduate degrees under a new board within the state department of health; and a bill that would add chiropody and podiatry to the professional services that may be covered by any non-profit medical service corporation.

Left in Committee Files

Among the legislative proposals left in committee files upon adjournment were the following:

A resolution for a state commission to investi-

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THROUGH . . .  the Microscope

Dr. E. Vincent Askey is new A.M.A. President

Doctor E. Vincent Askey, a Los Angeles surgeon, was inaugurated in June as president of the American Medical Association. He succeeds Doctor Louis M. Orr, Orlando, Fla.

As the 114th president of the A.M.A., Doctor Askey becomes the spokesman for more than 175,000 physicians.

The sixty-four-year-old surgeon is probably the only practicing physician who has ever held major offices in his county, state, and national medical associations. He was president of the Los Angeles County and California State Medical associations.

In 1952, he was elected vice speaker of the House of Delegates, the policy-making body of the A.M.A., and served as speaker from 1955 to 1959.

Born the son of a Methodist minister in Sligo, Pennsylvania, Doctor Askey attended Allegheny College at Meadville, Pennsylvania, and received his M.D. from the University of Pennsylvania in 1921.

He spent his internship and residency at the Hospital of the Protestant Episcopal Church and Kensington Hospital for Women in Philadelphia.

In 1958, Doctor Askey was awarded the honorary degree of doctor of science from Allegheny College. The citation said that despite a busy practice, he found time to serve as "a member and president of the Los Angeles City Board of Education; combining high ideals, responsible citizenship, distinguished professional achievements."

Medical Payments Up in Aid Programs

Medical payments for the needy under the four federal-state public assistance programs have more than doubled in a five-year period, the Health Insurance Institute said recently.

The four joint programs—Old Age Assistance (OAA), Aid to Dependent Children (ADC), Aid to the Blind (AB), and Aid to the Permanently and Totally Disabled (APTD)—accounted for $265 million in medical payments in 1958, an increase of 151 per cent over the $106 million paid out through these programs in 1953, the Institute said. The increase over 1957, when $224 million was paid, was 18 per cent.

Over the five-year period medical payments climbed under each of the programs, and the greatest increase, 287 per cent, was shown by the ADC program. The 1958 expenditures for medical care for each program were $177 million for OAA, $51 million for ADC, nearly $6 million for AB, and $31 million for APTD for a grand total of $265 million.

These various assistance programs also provide funds for the food, clothing and housing needs of the recipients. In 1958, more than 2.4 million elderly persons received OAA, some 2.8 million youngsters were helped by ADC, about 110,000 persons received AB benefits, and 328,000 was covered by the APTD program.

Total Payments: The total payments under all four programs in fiscal year 1958 came to $2.9 billion, of which the federal government contributed about 60 per cent.

The proportion of elderly persons receiving OAA has declined. The Institute stated that in 1949, more than 22 per cent of all persons aged 65 or over received OAA, but that by 1958, the figure had dropped to less than 16 per cent.

In a state-by-state breakdown in 1958, Louisiana had the highest figure with more than 57 per cent of its elderly receiving OAA, while New Jersey was the lowest with less than four per cent of its aged on the OAA rolls.

In 1958, some 34 out of every 1,000 children in the U. S. received aid under ADC. The state with the highest figure was West Virginia where 81 of every 1,000 youngsters were covered by ADC. New Jersey again was the lowest with 13 out of every 1,000 on ADC.

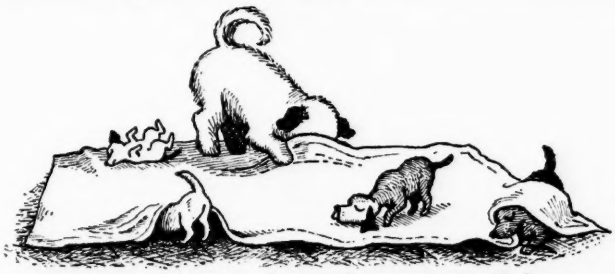
"Y" Membership Available for Physician

The membership and physical education committees of the downtown Y.M.C.A. are interested

continued on page 464

Toes are to wiggle

A lap is so you don't get crumbs on the floor



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THROUGH THE MICROSCOPE

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in securing the services of a physician on a scheduled basis of two hours per month, on a day and time suitable to the physician, to provide an added service of optional physical examinations for its members. In return for the service the physician would receive a complimentary membership in the businessmen's health club which has a monetary value of $90. Any doctor interested in the proposition should contact Albert L. Riberdy, director of membership services at the Y.M.C.A., 160 Broad street, Providence, Rhode Island.

In-between-meal Snacks Decried at Nutrition Conference

In-between-meal eaters are more apt to suffer tooth decay than those who eat only at regular times, a New York dentist told a nutrition conference in Boston recently.

Basil G. Bibby, D.M.D., said that candies and other sweets, which are usually taken as in-between-meal snacks, are the principal agents causing tooth decay.

He was the concluding speaker at the half-day symposium on *Nutrition in Tooth Formation and Dental Caries* sponsored by the American Medical Association's Council on Foods and Nutrition.

Doctor Bibby, who is director of the Eastman Dental Dispensary, Rochester, New York, in tracing the cariogenicity (decay causing quality) of foods, was particularly critical of snacks which have a high content of sugar. Unless removed, these foods stick to the teeth and are a contributing factor toward decay.

He noted that past studies have shown:

"Increased sugar consumption produced an increase of caries (decay).

"Sugar in liquid form was less cariogenic than when it was contained in a carrier such as bread.

"The more frequently sugar was taken between meals, the greater the increase in caries."

Doctor Bibby continued, if children could be persuaded to omit in-between-meal eating, "dramatic progress could be made in reducing caries activity, even if sugar was used with meals."

Letter to the Editor:

Most humans when in great danger call for help. It is a pity that certain parts of the human anatomy are inarticulate when in danger of receiving permanent injury. What terrific screams we would hear along our main thoroughfares if the women's feet could voice their feelings when crowded, pinched, twisted and shoved into the ridiculous footwear of the present vogue.

We ridicule the old Chinese custom of "foot binding" which caused grotesque deformities to their women's feet. The barbaric shoe fashions which have been taken up by many of our women, and the resulting deformities to the feet of our fair ones, is deplorable.

A goodly number of our younger female population are wearing a so-called sport type shoe which gives sufficient room for the toes and a moderate heel, allowing the foot a horizontal position, compared to the high heel which causes the wearer to walk balanced essentially on her toes. The extreme styles of women's footwear cause permanent deformities to the feet and early fatigue to the wearer.

I've wanted to write a short note concerning this subject for several years with the hope that some interest might be stimulated.

If you would see an active demonstration of the halting, limping, mincing gait, and the often painful expressions of the wearers of the modern shoe, stand for a few moments on one of our busy streets and observe the clinic.

EDWARD S. CAMERON, M.D.

Rhode Islanders Win Scholarships for Chest Study

Two Rhode Island physicians attended the 45th session of the Trudeau School of Tuberculosis and Other Pulmonary Diseases June 6 to 24 as winners of 1960 Rhode Island Tuberculosis and Health Association scholarships.

The winners are Doctor Ben C. Claunch, chief of the Tuberculosis Section of the medical service, Veterans' Administration Hospital, and Doctor Juan A. Alonso, assistant physician, Zambarano Memorial Hospital, the state sanatorium at Wallum Lake.

This is the first year in which the association has awarded more than one scholarship for the course, but the increasing need for physicians specially trained in chest diseases prompted the doubled appropriation. Each scholarship was for $500, to cover tuition and expenses for the course given at Saranac Lake, New York.

National Cancer Conference in Minneapolis Next September

The Fourth National Cancer Conference will be held at the University of Minnesota, Minneapolis, September 13-15, 1960. The theme of the Conference is *Changing Concepts Concerning Cancer,* and more than 2,000 scientists and physicians from the United States and abroad are expected to attend. The conference is sponsored jointly by the American Cancer Society and the National Cancer Institute of the Public Health Service, Department of Health, Education, and Welfare.

The conference will focus on three general topics —etiology, pathogenesis and spread, and therapy

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of malignant disease. In addition, panels of scientists will discuss the state of knowledge of the leukemias and lymphomas, and cancer of the breast, lung, gastrointestinal tract, genitourinary system, head and neck, and skin. Other panels will be devoted to cancer control and the role of environmental factors in the occurrence of cancer.

Interested scientists and physicians are invited to attend.

Copies of the conference program and registration cards may be obtained from the National Cancer Conference Co-ordinator, American Cancer Society, 521 West 57th Street, New York 19, N. Y.

4,769 More Doctors in 1959

The physician population of the United States and its possessions increased by some 4,769 in 1959, the Council on Medical Education and Hospitals of the American Medical Association reported recently.

This was an increase of 660 over the gain reported in the previous year, according to the council's report in the current (May 28) JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

The increase of 4,769 results from the licensing of 8,269 new physicians minus approximately 3,500 physicians who died.

Of the 8,269 new physicians, 1,626 were foreign-trained.

The largest number of first licenses issued was 1,121 by New York. Three other states issued more than 500 first licenses—California 676, Illinois 521, and Pennsylvania 530.

The most notable increases, compared with 1958, were in Alabama, Connecticut, Illinois, New Jersey, Puerto Rico, South Carolina, and Tennessee. There was no marked decrease evident in any state.

The over-all total of licenses to practice medicine and surgery issued in 1959 was 15,954. This figure represented 7,720 granted after a successful written examination and 8,234 granted by reciprocity and endorsement of state licenses or the certificate of the National Board of Medical Examiners. This was an increase of 714 over 1958.

There were 8,996 applicants for licensure by written examination of whom 1,162, or 12.9 per cent, failed. This may be compared with 8,633 applicants of whom 1,365, or 15.8 per cent, failed in 1958.

Nine schools in the United States had no failures among their graduates in medical licensing examinations last year. They are the University of California, Los Angeles; University of California, San Francisco; Louisiana State University; University of Minneosta; University of Mississippi; University of Nebraska; Woman's Medical College of

Pennsylvania; Medical College of South Carolina, and Marquette University.

The 8,996 examinees included 5,845 graduates of approved medical schools in the United States; 178 graduates of approved medical schools in Canada; 2,766 graduates of 244 faculties of medicine located in countries other than the United States and Canada; 22 graduates of the unapproved medical schools in the United States which are no longer in existence, and 185 graduates of schools of osteopathy.

The number of physicians registered in 1959 was 16,068, the greatest number in 56 years.

Rhode Island Health Insurance Benefits Reach New High

Health insurance benefit payments by insurance companies to the people of Rhode Island climbed to a new high during 1959, the Health Insurance Institute reported recently.

In the period from January 1 through December 31, 1959, said the Institute, an estimated $5.2 million was paid out to help cover the cost of doctor and hospital bills, and to replace income lost through sickness or disability.

This represents a gain of 16 per cent over the 1958 figure of $4.5 million, and is based on reports from insurance companies, doing business in the state.

The rise in benefit payments in Rhode Island was reflected in the figures for the nation as a whole, the Institute declared. Persons with health insurance received a total of more than $2.9 billion in benefits from their insurance company policies in 1959, up 9.6 per cent over the previous year's high of more than $2.6 billion.

Epilepsy League to Fill Members' Prescriptions at Cost

The National Epilepsy League has announced that it will fill its members' prescriptions at cost. The service, believed to be an entirely new concept in national voluntary health agency programing, was announced following the League's twenty-first annual board meeting held in Chicago in April.

"It is our purpose," Howard R. Koven, newly elected chairman, stated, "to provide this service direct to epileptics at cost, with an annual membership-service fee of $1. Our accountants recommend that the plan be introduced with a 25 per cent reduction from regular prices. Quite naturally, in formulating operating procedures strict ethical and legal controls have been installed to assure the highest professional standards." Mr. Koven listed these as follows:

1. Fill only prescriptions authorized and signed by the member's own physician since the league does not offer medical advice on diagnosis or treatment; 2. service limited to epileptics and the medications employed in the management of epilepsy; 3. prescriptions from epileptics anywhere in the United States filled by the league from its headquarters at 208 N. Wells Street, Chicago 6, by its own registered pharmacists; 4. orders filled promptly under a careful system of controls; 5. administrative supervision of this new program activity to remain with the league's board of directors through its executive staff and special professional consultants; 6. as with other programs of the league, the prescription service is to be operated on a not-for-profit basis.

N. E. Anesthesiologists to Meet in New Hampshire

The third annual regional conference of the New England Society of Anesthesiologists will be held Friday and Saturday, September 16 and 17, at Bretton Woods, New Hampshire. Complete information on the meeting may be secured from Doctor Thomas K. Burnap, P.O. Box 81, Kenmore Station P.O., Boston, Massachusetts.

Investment-retirement for New England Physicians Under Study

The Council of the New England State Medical Societies, at its Annual Meeting on April 24, 1960, approved the formation of a Retirement Plan to be launched under the auspices of the Council for the members of the New England State Medical Societies.

continued on next page

If any State Society, County Society, or even individual physician is contemplating an investment-retirement plan of an annuity-common stock-bond nature, that Society or individual is asked to wait until this New England Physicians Retirement Plan has taken its next step—the working out of details, now that general approval has been given —to see if, by being on the broad base of all the physicians in New England this isn't something better than one can work out for himself on a narrower basis.

The detailed report will be presented to the Council of the New England State Medical Societies at its semiannual meeting which will be held on 26 October, 1960 at 2:00 P.M. in the Hotel Statler, Boston.

Society for Clinical Nutrition Formed

The formation of a new professional association, the American Society for Clinical Nutrition, was announced during the meetings of The American Society for Clinical Investigation and The American Federation for Clinical Research. Arrangements are being made to affiliate the ASCN with the American Institute for Nutrition.

Richard W. Vilter, M.D., professor of medicine and chairman of the department, University of Cincinnati, College of Medicine, was elected president of the ASCN by the charter members at the organization's first meeting.

A four-point list of objectives adopted at the first meeting states that the ASCN shall:

1. Foster high standards for research on human nutrition.
2. Promote undergraduate and graduate education in human nutrition.
3. Provide a place and opportunity for research workers on problems of human nutrition to present and discuss their research activities and results.
4. Provide a journal for the publication of meritorious work on human nutrition.

A September Invitation to West Berlin

The Secretary General of The World Medical Association, Doctor Louis H. Bauer, extends a cordial invitation from the German Medical Association to all the members of the Medical Society of Rhode Island to attend the XIVth General Assembly of The World Medical Association being held in West Berlin, Germany, September 15-22, 1960.

The World Medical Association needs the support of every American physician in its struggle to maintain high standards in medicine and to protect the freedom of medical practice, both of which are threatened all over the world.

For details write: The World Medical Association, United States Committee, Inc., 10 Columbus Circle, New York 19, N. Y.

Friars Dominate AED National Convention

Approximately 250 student, faculty, and alumni members and guests from 56 chapters in 28 states attended the national meeting of Alpha Epsilon Delta, national premedical honor society, at the University of Louisville on April 7-9, 1960. The Rhode Island Alpha Chapter, Providence College, set the grand slam record in winning four Convention Awards, including the Activities Cup, The Scalpel Award, the Attendance Award, and the special award for 100% Attendance of the Chapter Membership—20 student members, the faculty adviser, and 5 guests.

National officers elected for the biennium 1960-62 are: Doctor Norman F. Witt, head, Department of Chemistry, University of Colorado, President; Doctor John A. Fincher, Dean, Howard College, Birmingham, Vice-president; Doctor Maurice L. Moore, Director of New Product Development, Sterling Drug, Inc., National Secretary-Historian and Editor of The Scalpel; Rev. Charles V. Reichart, O.P., Premedical Advisor, Providence College, Treasurer; Doctor Lloyd R. Gribble, Assistant Dean, College of Arts and Sciences, West Virginia University, National Councilor.

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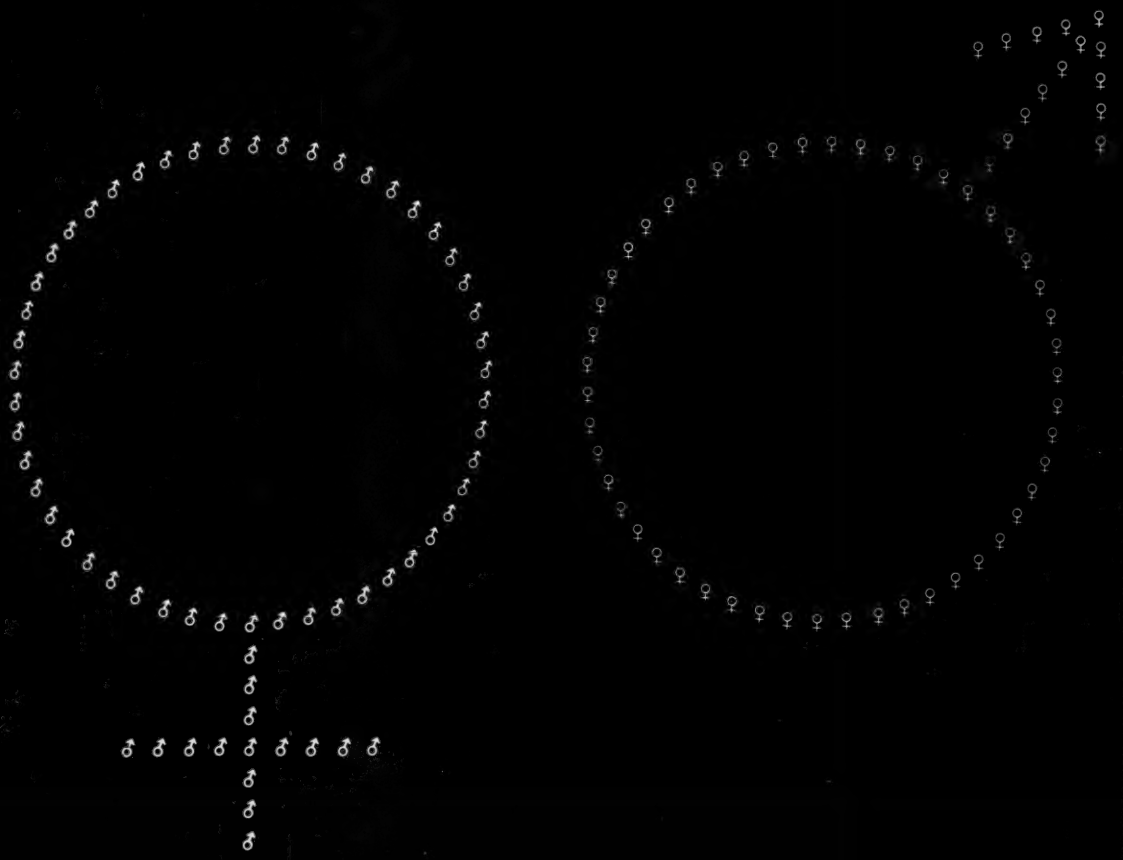

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*Marmell, M., and Prigot, A.: Tetracycline phosphate complex in the treatment of acute gonococcal urethritis in men. Antibiotic Med. & Clin. Ther. 6:108 (Feb.) 1959.

BRISTOL

BRISTOL LABORATORIES,
SYRACUSE, NEW YORK

The heavy emphasis on the lower prices of American drugs in foreign countries also had a lot of nonsense in it, though it takes a little more trouble to show up the non-sense in this accusation, which, heaven knows, made the headlines. As you know, the general impression was created that the American manufacturer made tablets in his American plant and sold them in the U.S.A. for, say, $3.00 a bottle, at the same time selling this bottle for $1.00 abroad. Now, what actually happens 90% of the time is that pharmaceutical products sold abroad are made abroad, whether they are produced by foreign companies or by foreign branches of American concerns. The manufacturing, distribution and selling of them – all the costs – are based on the far lower wage scale in the foreign country.

Let me use SK&F's chlorpromazine as an example. The average prescription price of fifty 25 milligram tablets here is about $5.00. The dollar price is $1.90 in West Germany; $1.62 in Italy; and $2.29 in Japan. But there is an even wider spread between the average United States wage of $2.22 per hour and the foreign wages of 58 cents in West Germany; 34 cents in Italy; and 30 cents in Japan. Consequently, the American patient has to work only 2 hours and 18 minutes to pay for this prescription—whereas the German must work 3 hours and 18 minutes; the Italian, 4 hours and 46 minutes; and the Japanese 7 hours and 38 minutes. Thus, the Italian, for example, charged less than one third of the American price, ironically has to work more than twice as long as the American to pay for his medicine.

. . . From an address called *The Real Issue*, by Francis Boyer, chairman of the board of Smith Kline & French Laboratories, before the 1960 meeting of the California Pharmaceutical Association, May 22, 1960.

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More on Hospital Costs — Report on Indiana Study

Hospital costs vary according to what ails the patient, and their range is wide, Health Information Foundation reported recently. The average cost per admission in one study was $166, and ranged among the categories analyzed from a low of $54 for diseases of the upper respiratory system to $503 for digestive cancer.

In its monthly statistical bulletin, *Progress in Health Services,* the Foundation published an analysis of the 1956 records of one Blue Cross Plan—the Blue Cross Hospital Service of Indiana—and, specifically, the 843,000 subscribers enrolled under one prepayment program. Among the major findings:

One fifth of all hospital admissions were for obstetrical care. But since the average stay per obstetrical case was fairly short, at 4.6 days, the total hospital bill per admission in this category was below average at $119.

Of all the major diagnostic categories analyzed, cancer was responsible for the longest average hospital stay, 15.5 days. And since the average charge per day was high, cancer patients also averaged the highest bills per admission, $387.

Diseases of the digestive system, such as ulcers, hernia, and appendicitis, accounted for a larger share of total hospital days than any other category —145.2 per 1,000 insured individuals a year, or one sixth of the total days for all admissions.

According to the Foundation study, there were 115.5 hospital admissions per 1,000 in the covered population for all causes, and the average length of stay per admission was 7.3 days. Total hospital use, the product of the two factors, amounted to 838.8 days per 1,000 persons annually.

Hospital bills submitted to Blue Cross averaged $22.91 a day for room rate and other charges, or $166 for each hospital stay. These bills, when spread over the entire insured population (whether or not they were hospitalized) came to $19.22 per person per year, the Foundation stated, which corresponds closely to the average annual expenditure on hospital services of $22 in 1957-58 as reported by H.I.F. in February of this year.

According to George Bugbee, Foundation president, the data "give little support to the criticism that great numbers of patients are unnecessarily admitted to general hospitals or could be treated less expensively elsewhere."

New Rules for Medical Examination of Civil Airmen

Effective June 15, 1960, the Federal Aviation Agency will require that student and private pilots

be given their medical examinations by designated medical examiners. This rule reinstates a practice which was in effect from 1926 until 1945.

In announcing the reestablishment of this practice, Doctor James L. Goddard, the Civil Air Surgeon, has emphasized his previous statements that any physician may be considered eligible for designation as an examiner.

His statement, made public February 11, 1960, follows:

> In order to have a better understanding of the proposed rule, I wish to point out that it is designed to accomplish the following needed improvements in the administration of the Agency's medical certification program.
>
> 1. To maintain a group of medical examiners who are clearly responsive to the needs of public safety in the performance of examinations and the issuance of medical certificates to airmen.
> 2. To permit the administration of training programs to maintain the quality of performance of medical examiners and to permit the dissemination of special instructions pertaining to the needs of civil aviation.
> 3. To bring into the program those physicians who have the professional qualifications and a demonstrated interest in the medical certification field.
> 4. This would permit the designation of any qualified physician who, by his application, has demonstrated interest in the program.

Those physicians in localities where flying activities are conducted may wish to consider filing an application for designation by writing to the Civil Air Surgeon, Federal Aviation Agency, Washington 25, D. C.

Designation as an aviation medical examiner will qualify the designee to examine both Class II (commercial) and Class III (student and private) airmen, including control tower operators. Instructions concerning the required procedures, standards, and equipment will be supplied to those who apply.

Since commercial and airline transport pilots have always been required to obtain examinations from specifically selected physicians, there are presently some 2,000 aviation medical examiners previously designated and located throughout the country. Expanding aviation activities will result in a continuing need for additional examiners. There are at present some 400,000 active civil airmen of whom approximately 240,000 are examined each year.

PATRONIZE JOURNAL ADVERTISERS

BOOK REVIEWS

A TRAVELER'S GUIDE TO GOOD HEALTH by Colter Rule, M.D. Doubleday & Company, Inc. Garden City, N. Y., 1960

Travel is so easy and frequent today and the talk about it so extensive, most of us are fairly well oriented in travel techniques before starting out. Not only are travel agents helpful in a thousand small ways but travel literature and guidebooks contain many helpful hints.

For these reasons I found this book, in essence, no more than a home medical guide with some travel applications. To be sure, the usual immunization schedules are included as well as advice on the care of tired feet, but I am not convinced that in an emergency, one needs to know how to cry out for help in French, German or Italian.

CHARLES POTTER, M.D.

MASTER YOUR TENSIONS AND ENJOY LIVING AGAIN by George S. Stevenson, M.D. and Harry Milt. Prentice-Hall Inc., Englewood Cliff, N. J. 1959. $4.95

This is a book for the layman. The necessary oversimplification does not prevent the presentation of many ideas designed to help those whose tensions arouse overpowering emotional reactions.

The implication in the title that tensions *per se* are a foe of successful and therefore enjoyable life, is corrected in the text and by stressing the keywork *Master* in the title. Mention is made of the athlete in competitive sports who seeks tension producing situations, and this might be extended to include all enterprising leaders.

An introductory chapter titled *This Shook Up Age,* points out that although our physical security is in many ways greater than ever before, psychological security is compromised by the constant challenging of our deepest faiths, the constant movements by which we find ourselves in strange environments for from the "home" feeling of well-proven secure surroundings, the rapid changes in knowledge and mores which lead to conflicting demands.

Next is a chapter defining tension and its causes, the "fight or flight" reactions to threats to our physical or psychological security. Following this is a discussion concerning anxiety, the anticipation of possible future threats with doubts as to our ability to meet these anticipated threats.

After the above introduction the main theme emerges in discussions of self-diagnosis and self-application of methods of alleviation of tensions. First is an outline of self-questioning to determine the degree to which our own tensions are handled in a less than optional manner. Perhaps the errors inherent in self-diagnosis are not so important here, in that the eight following chapters, each discussing under a slogan methods for the alleviation of tension, may be universally beneficial, or lead to professional help where needed. The slogans are *Talk it out, Escape for Awhile, Take One Thing at a Time, Get Rid of "Your anger," Curb the Superman Urge, Take a Positive Step Forward, Do Something for Somebody Else, Knock Down the Barb Wire Fences.*

The third and concluding section of the book is headlined *How to Avoid Tension Building Situations.* It seems to me that the word "Handle" in place of "Avoid" would better describe the text that follows. Two chapters are devoted to two basic emotional needs of children; love and discipline, and what the proper providing of these needs can do for the parents. At the onset it is recognized that children are human, are not saints, can be "horrible" as well as wonderful. Parental love is fortunately instinctive, but can be readily weakened by parental ego weakness, by substitution of a desire for admired rather than loved children so that parental ego will be bolstered. Children can well tolerate criticism of their errors, scolding for their misdeeds and punishment for misbehavior, as long as they can feel that these things are temporary and related only to the immediate situation, that the firm love that brings moderation and consistency to their disciplining remains, no matter what they have done. Such an unselfish love can even weather the turbulent adolescent breaking away period, when the parents may become the lightning rod for highly charged resentments and disturbances of this period because love makes them the only safe outlet.

A chapter on job tensions, stressing the importance of human values in interpersonal job relationships, and a chapter well titled *Marriage and Common Sense* ending with the advice *Don't look*

for Heaven in Marriage—Look, and work, for a good and happy married life, complete the book.

The value of this book lies in its easily understandable, "common sense" approach to problems all must face in their own inevitable self analysis. Included are precautions that professional help should be sought where emotional reactions are too overpowering or where types of reaction suggest thinking too far removed from reality. Perhaps it should be read particularly by young parents and by teachers, whose mishandling of their own tensions may have adverse effects on the succeeding generation.

C. J. HUTCHINSON, M.D.

CURRENT THERAPY—1960. Edited by Howard F. Conn, M.D. W. B. Saunders & Co., Phil., 1960. $12.00

This is an annual review of therapeutic measures which allows today's doctor of medicine to ride the tide in the flood of therapeutic literature. It is in its 12th edition and represents a completely new one rather than a revision of the old.

The roster of contributors is an impressive list of eminent authorities from various parts of the United States of America, Canada and includes two from India.

The book is in large folio, definitely not pocket size and is not meant for reading through at least not in the mind of the present reviewer. Rather it is an excellent reference book reflecting the concepts of therapy in a wide cinemascopic view of practically every known disease in the year A.D. 1960. It will have special interest for Rhode Island physicians in the articles submitted by two of their colleagues in the dermatology section: *Herpes simplex* by Arthur B. Kern and *Diseases of the nails* by Francesco Ronchese.

Unfortunately, it cannot appeal to everyone because while it is timely, it is not timeless. Yesterday's medicine is so often outmoded by today's that no doubt with the fast moving age of atoms and electrons, today's medicine may not find itself wholly acceptable tomorrow. Albeit, the physician can make use of the present volume at least until the 1961 edition and then commit its 1960 confrere to history.

JEANNETTE E. VIDAL, M.D.

SMOKING AND HEALTH by Alton Ochsner, M.D. Julian Messner, Inc., N. Y., 1959. $3.00

In this small volume, Doctor Ochsner, distinguished surgeon and teacher, has presented many of the more striking facts and figures which demonstrate the damage to human health caused by the use of tobacco. He can speak with great authority. As a skillful thoracic surgeon he has become so tragically familiar with the ever-increasing fatal results of bronchogenic carcinoma that he is willing to speak and write most emphatically on its demonstrated relationship to its principal cause, the smoking of cigarettes. With much of the material in the book the medical profession is familiar, and there are few doctors unwilling to admit this causal relationship whether or not they continue to smoke.

The book is obviously written for the general public and can be highly recommended. Were Doctor Ochsner to rewrite it, this reviewer believes that he would place more emphasis on the chronic bronchiolitis and resulting obstructive emphysema which appears to the internist to be as lethal an effect of long-term inhalation of cigarette smoke as is pulmonary carcinoma. The harmful effect of tobacco on cardiovascular and gastric conditions is well presented.

Finally, the author points out the terrible responsibility of the tobacco industry with its six-million-dollar yearly business (and its $2,500,000,000 yearly contribution in taxes to the government). Considering the government's own indictment, through the U. S. Public Health Service, of cigarette smoking as a cause of lung cancer, this is not a pretty picture.

ALEX. M. BURGESS, M.D.

SUMMARY OF PUBLIC HEALTH LEGISLATION IN RHODE ISLAND, 1960

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gate drug prices in Rhode Island; a study of the employment problems of the workers in the 50-60-year age group; an increase in the number of medical examiners; a bill for a commission to study hospital charges and Blue Cross rates; and several workmen's compensation proposals, including one eliminating the stated allowances for hospital and medical allowances, and one making deafness a compensible injury.

N. E. POSTGRADUATE ASSEMBLY CANCELED

The Committee on Medical Education of the Massachusetts Medical Society at its meeting on June 7 decided to omit the New England Postgraduate Assembly for 1960.

The 1961 New England Postgraduate Assembly will be held at the Statler-Hilton, November 7, 8 and 9. Committee meetings will begin in the fall, at which time you will be notified.

BENEFIT PAYMENTS BY INSURANCE COMPANIES

During the first three months of 1960 some $767 million in health insurance benefits were received by Americans from the nation's insurance companies. This was an increase of more than 10 per cent over the same period in 1959. A distribution of benefits according to type of coverage for the first three months of 1959 and 1960 follows:

Type of Coverage	*3 months 1960*	*3 months 1959*	*% Increase*
	(in millions of dollars)		
Hospital Expense*	$303	$274	10.6%
Surgical Expense*	102	98	4.1
Regular Medical Expense	29	26	11.5
Major Medical Expense	99	76	30.3
Loss of Income**	234	222	5.4
TOTAL	$767	$696	10.2%

*Excludes benefits for hospital and surgical expenses received by major medical expense policyholders.
**Includes accidental death and dismemberment benefits.

INDEX OF ADVERTISERS

INTERIM MEETING

The RHODE ISLAND MEDICAL SOCIETY

Wednesday, November 9, 1960

at 3:00 P.M.

at the

SQUANTUM CLUB

East Providence, Rhode Island

SCHEDULE OF FUTURE MEETINGS

(Mark your calendar *now* for the dates applicable to you)

Monday, September 5. Labor Day.

Wednesday, September 14. Annual Meeting and Golf Tournament of the Providence Medical Association. Newport Country Club and Shamrock Cliff Hotel, Newport (1:00-10:00 P.M.).

Monday, September 19. Meeting of the Council, Rhode Island Medical Society, Hope Club, Providence (6:00 P.M.).

Wednesday, September 28. House of Delegates, Rhode Island Medical Society, Medical Library (8:00 P.M.).

Monday, October 3. Providence Medical Association meeting. CPC, Medical Library (8:30 P.M.).

Monday-Saturday, October 10-15. American College of Surgeons meeting, San Francisco, California.

Wednesday, October 12. Columbus Day.

Wednesday, October 19. Gerber Oration. Miriam Hospital (8:30 P.M.).

Wednesday, October 26. Council of New England Medical Societies, Statler Hotel, Boston (afternoon).

Wednesday, November 2. Kenney Clinic Day. Memorial Hospital, Pawtucket (all day).

Monday, November 7. Providence Medical Association meeting. Medical Library (8:30 P.M.). *Speaker:* MARK ALTSCHULE, M.D.

Wednesday, November 9. Interim Meeting, Rhode Island Medical Society, Squantum Club, East Providence (3:00-10:00 P.M.).

Friday, November 11. Armistice Day.

Monday, November 14. Meeting of Council, Rhode Island Medical Society, Hope Club, Providence (6:00 P.M.).

Thursday-Friday, November 17-18. College of Physicians, Regional meeting, Boston.

Thursday, November 24. Thanksgiving Day.

Tuesday, November 29-Friday, December 2. Clinical Session of the American Medical Association, Washington, D. C.

Monday, December 5. Providence Medical Association meeting, Medical Library (8:30 P.M.).

Saturday, December 10. Annual Dinner-Dance. Woman's Auxiliary to the Rhode Island Medical Society (evening).

Monday, January 9, 1961. Annual Meeting of the Providence Medical Association, Medical Library (8:30 P.M.).

she calls it "nervous indigestion"

diagnosis: a wrought-up patient with a functional gastro-intestinal disorder compounded by inadequate digestion. **treatment:** reassurance first, then medication to relieve the gastric symptoms, calm the emotions, and enhance the digestive process. **prescription:** new Donnazyme—providing the multiple actions of widely accepted Donnatal® and Entozyme®—two tablets t.i.d., or as necessary.

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THE WASHINGTON SCENE

A Report Issued by the Washington Office of the American Medical Association

CONGRESS RETURNED TO WORK this month to take up its unfinished business, including the controversial issue of health care for the aged, an atmosphere dominated by election-year politics.

The three or four week, tag-end session of Congress loomed as one of the most important meetings in the past decade as far as possible impact on the medical profession is concerned.

The lawmakers are slated to decide whether to embark the Federal government on a course that could threaten the private practice of medicine, or to adopt a voluntary program that would pose no such danger.

The omnibus social security bill approved by the House Ways and Means Committee was easily cleared by the House, 381 to 23, and sent to the Senate Finance Committee, which held two days of hearings. The measure contained a voluntary, federal-state program for assisting needy aged persons meet their health care costs. Both the administration and the American Medical Association endorsed the House measure as in keeping with the concept of giving the states prime responsibility for helping their citizens, for aiding those who are most in need of help, and for avoiding the compulsory aspects of health plans involving the social security mechanism.

It would be up to each state to decide whether it participates in the program. The extent of participation—the number of benefits offered to older persons—also would be at the option of individual states.

The states would determine the eligibility of older persons to receive benefits under the program. However, the legislation laid down a general framework for eligibility: persons 65 years and older, whose income and resources—taking into account their other living requirements—are insufficient to meet the cost of their medical care.

The program couldn't become effective until July 1, 1961. Before putting such a program into effect, a state would have to submit to the Federal government a plan meeting the general requirements outlined in the legislation.

The program would be financed jointly by the Federal and state governments. Federal grants would have to be matched by participating states on the same basis as under the present old-age assistance formula.

States could elect to provide, with Federal financial aid, any or all of the following benefits:

1) Inpatient hospital services up to 120 days per year; 2) skilled nursing-home services; 3) physicians' services; 4) outpatient hospital services; 5) organized home care services; 6) private duty nursing services; 7) therapeutic services; 8) major dental treatment; 9) laboratory and X-ray services up to $200 per year, and 10) prescribed drugs up to $200 per year.

The committee put a $325 million price tag on the program for the first full year of operation—$185 million Federal and $140 million state. However, this estimate could hardly be more than an educated guess of sorts. The actual cost would depend upon unpredictable factors—how many states would participate, how many benefits they would offer, and how many older persons would qualify and what services they would require.

The committee estimate was based on between 500,000 and one million older persons a year receiving health services under the program. If all states participated fully, the committee said, potential protection would be provided as many as ten million aged whose financial resources are so limited that they would qualify in case of serious or extensive illness.

Payments under the program would go directly to physicians and other providers of medical, hospital and nursing services.

In addition to the federal grants for the "medically indigent," about $10 million more in federal funds would be authorized for payment to states for raising the standards of medical care benefits under present public assistance programs for older persons.

The approach of the Mills program was similar to that of Point 2 of the American Medical Association's eight-point program for health care of the aged. Point 2 stated that the A.M.A. supports federal grants-in-aid to states "for liberalization of existing old-age assistance programs so that the near-needy could be given health care without having to meet the present rigid requirements for indigency." Such a liberalized definition of eligi-

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THE WASHINGTON SCENE

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bility should be determined locally, the A.M.A. said.

Approval of the Mills plan by the committee marked a sharp setback for organized labor leaders. But they continued their all-out pressure campaign in an effort to get Congressional approval of Forand-type legislation that would use the Social Security system to provide hospitalization and medical care for the aged. After being defeated in the Ways and Means Committee, labor union leaders and other supporters of Forand-type legislation directed their major efforts to trying to get the Senate to substitute the Social Security approach.

A vote by the Finance Committee, headed by Sen. Harry F. Byrd (D., Va.), was scheduled shortly after the Senate resumed operations in August. Whatever action the Committee took, however, proponents of schemes such as the Forand bill to provide a compulsory, federal medical program promised a determined fight on the floor of the Senate.

In the event Congress should approve a government medicine plan, opponents were counting on a Presidential veto to kill the measure. The Chief Executive repeatedly has asserted in strong language his all-out opposition to any compulsory plan for health care financing.

At the Senate Finance Committee hearing, Arthur S. Flemming, Secretary of Health, Education and Welfare, renewed the Administration's flat stand against the social security avenue to financing health costs. Such a plan, he said, would inevitably lead to pressures for expanding the benefits and lowering or eliminating the age requirement. Under such circumstances, a 15 per cent or 20 per cent social security payroll tax would not be too far off, he said. "We believe it is unsound to assume that revenue possibilities from a payroll tax are limitless."

Doctor Leonard W. Larson, president-elect of the American Medical Association, told the Committee the House bill is the "antithesis of the centralized, socialized, statist approach of the proposals advocating national compulsory health insurance."

"To those critics who call this program modest, we say that fiscal irresponsibility, unpredictable cost and maximum nationalization are not the accepted criteria for good legislation," he testified.

A spokesman for the insurance industry pointed out "giant strides" made by private health insurance in recent years in covering aged persons. E. J. Faulkner declared that one of the most prevalent and erroneous assumptions on the matter is that most of the aged aren't able to contribute to financing their own health care costs.

The Social Security health bills, he said, "would impair or destroy the private practice of medicine, would add immeasurably to our already crushing tax burden, would aggravate our severe public fiscal problems, and would entail other undesirable consequences."

In other testimony, the AFL-CIO again urged enactment of a Social Security health bill; the American Optometric Association and the International Chiropractors Association urged that health benefits included in any bill include the services of osteopaths and chiropractors, respectively.

On another legislative proposal of interest to the medical profession—the Keogh-Simpson bill —a Senate debate was scheduled this month. Sen. Gordon Allott (R., Colo.) said in a Senate speech that "I believe that this legislation will have the overwhelming support of this body."

The bill, which would encourage retirement savings by the self-employed such as lawyers, small businessmen and physicians, has already been approved by the House. The Senate bill, voted by the Senate Finance Committee, would require participating self-employed to establish retirement plans for their employees.

Also, among the changes in the Social Security program called for in the catch-all bill approved by the Ways and Means Committee was one that would provide compulsory coverage under the system for doctors.

About 150,000 self-employed physicians would be covered by Social Security on the same basis as lawyers, dentists and other self-employed professional people now are covered. Becoming effective for taxable years ending on Dec. 31, 1960, or June 30, 1961, self-employed physicians would be required to pay a Social Security tax of 4½ per cent of the first $4,800 of income. Physicians also would be subject to the automatic increases in the Social Security tax in future years.

Medical and dental interns would be covered for the first time also.

DISTRICT MEDICAL SOCIETY MEETINGS

NEWPORT COUNTY MEDICAL SOCIETY

THE regular meeting of the Newport County Medical Society took place on July 6, at Christie's Restaurant, with Doctor José M. Ramos, president, presiding.

The guests for the evening were: Doctor Earl J. Mara, president of the Rhode Island Medical Society, Captain Ernest Joy, chief medical officer of Deslant, and Captain Jesse Suiter, executive officer of the Naval Hospital.

The speakers of the evening were: Admiral Charles E. Weakley, commander of the Destroyer Forces U. S. Atlantic Fleet, and Captain Joseph L. Yon, commanding officer of the Newport U. S. Naval Hospital.

Admiral Weakley spoke on *The Role of the Navy in National Defense* and also discussed the civic roles played by the navy in whatever environment it found itself.

Captain Yon gave a spirited talk on the *Necessity of Close Collaboration between Civilian and Naval Medicine in the Island of Aquidneck.*

Doctor Mara then spoke on the need for more enthusiasm and stimulus on the part of the District Medical Societies in playing more vital roles in the workings of the Rhode Island Medical Society, and offered to naval medicine the unstinted support of the state medical society in the collaboration between civilian and naval medicine.

The business meeting was dispensed with due to the lateness of the hour, and the meeting adjourned at 10:45 P.M.

Respectfully submitted,

JOSÉ M. RAMOS, M.D., *President*

WOONSOCKET DISTRICT MEDICAL SOCIETY

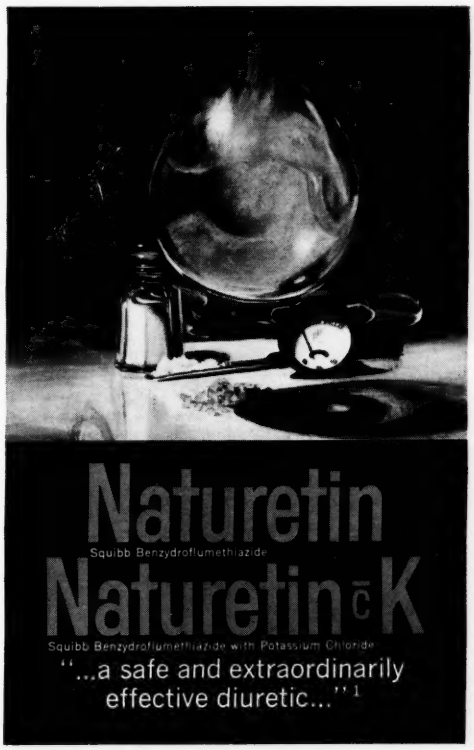
A special meeting was held at the library of the Woonsocket Hospital at 11:00 A.M. to discuss the present epidemic of poliomyelitis in Rhode Island, and the Society's co-operation and endorsement of the program of free immunization clinics for low income families and welfare recipients in the Woonsocket area as sponsored by the PROVIDENCE JOURNAL. Doctor Victor H. Monti, president, was in charge of the meeting.

It was voted unanimously to co-operate with the clinics and also any other immunization clinics of a similar nature set up in this area. The first clinic is to be held Friday, July 22, 1960 at the Citizens Memorial School near Morin Heights. This clinic will be staffed by a specialist with a jet injector so that no local medical personnel will be needed at that time.

The following physicians volunteered to give injections in this area on Tuesday or Thursday evenings: Victor H. Monti, Ernest L. Dupre, Joseph A. Bliss, Edward D. Medoff, Robert L. Farrelly, Cyril Israel, Leo Dugan, Alfred E. King, Jean A. Guay, Auray Fontaine, Philip J. Morrison, Augustine W. Eddy and Paul Cohen.

Respectfully submitted,

ALTON P. THOMAS, M.D., *Secretary*



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Although Naturetin causes the least serum potassium depletion as compared with other diuretics, supplementary potassium chloride in Naturetin c̄ K provides added protection when treating hypokalemia-prone patients; in conditions where likelihood of electrolyte imbalance is increased or during extended periods of therapy.

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BOOK REVIEWS

STERIC COURSE OF MICROBIOLOGICAL REACTIONS, edited by G. E. W. Wolstenholme and Cecilia M. O'Connor. Little, Brown and Company, Boston, 1959. $2.50

This study group, under the sponsorship of the Ciba Foundation, London, discusses the most recent developments in the area of the steric course of microbiological reactions.

The subject matter is divided into five chapters dealing with an historical review; the mechanism of hydrogen transfer with pyridine nucleotides; the steric mechanisms involved in the reactions of lactic acid; the steric and molecular specificity of steroid dehydrogenases; and the steric course of some microbiological and enzymic reductions of ketones. Two principal technical points dominate the book. These are: (a) the development of the Ogston principle of stereo-chemistry and (b) the demonstration of an actual hydrogen transfer in enzymatic reactions involving nicotinamide nucleotide as coenzyme.

A good deal of actual laboratory data is presented. This book presupposes a working knowledge of stereochemistry, kinetics and physical-organic chemistry. It is designed primarily for research workers in the enzyme field who are interested in establishing reaction mechanisms.

Although the text is excellent for the purpose for which it is intended, the busy physician can more profitably devote his reading time to other areas more closely related to medical practice.

DONALD H. MCGLORY, PH.D.

The TEEN-AGE YEARS, by Arthur Roth, M.D. Doubleday and Co. Inc. New York. 1960, $3.95

This is a readable, untechnical but authoritative discussion of teen-age medical problems. It covers everything from skin to sex. It would be well for parents to read not only from the standpoint of special problems that come up, but in anticipation of future problems. It tells the medical and physical problems that commonly worry teen-agers.

It can be read also by young people themselves and would answer questions which they might be loath to ask their parents.

It is a good book for doctors of young people to recommend and it would be an excellent book to have on the shelves in public libraries.

AMY E. RUSSELL, M.D.